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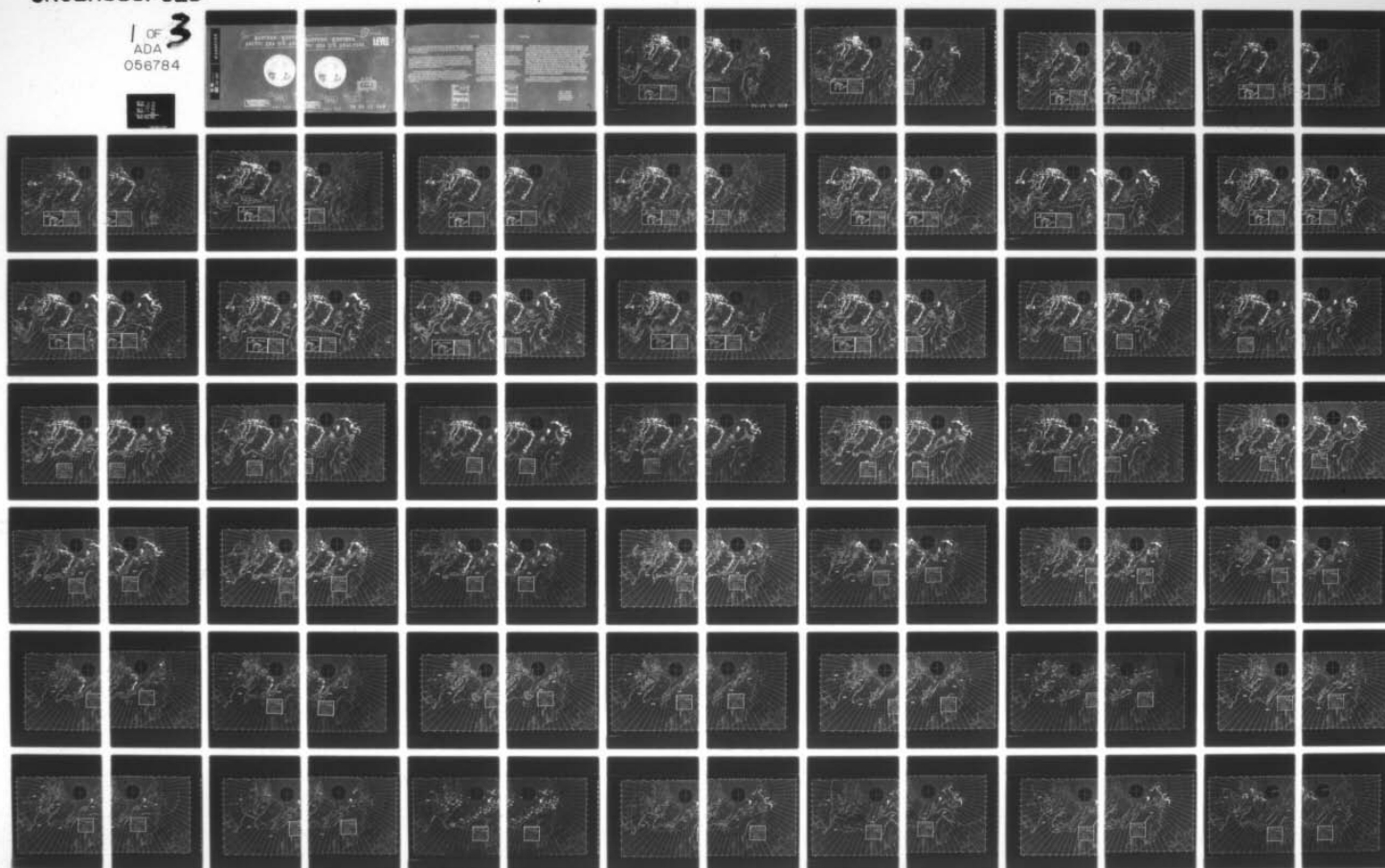
FLEET WEATHER FACILITY SUITLAND MD
EASTERN - WESTERN ARCTIC SEA ICE ANALYSES.(U)
1977

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(6) EASTERN—WEST
ARTIC SEA ICE AN



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FOREWARD

The U.S. Navy has a long and colorful history of polar exploration and currently is an active participant in the growing national activity in the Arctic and Antarctic. The strategic importance and increased demand for the natural resources of these areas has resulted in a greater requirement for environmental information.

Until a few years ago, reliable sea ice information in the polar regions was based on a relatively few shore station and ship reports augmented by limited aerial reconnaissance data. These data were further restricted to the relatively small areas observed primarily during the ship operating season. The principal aim of this publication is to provide operators and researchers with historical weekly hemispheric analyses of sea ice conditions derived principally from satellite imagery supplemented by conventional observations.

The advent of high resolution satellite imagery combined with the ground truth of conventional observations has only recently provided description of the polar ice fields on a semi-synoptic scale. Since 1970, the Fleet Weather Facility at Suitland, Maryland has prepared operational analyses and forecasts of sea ice conditions in the Arctic and Antarctic for the Department of Defense and various other users. The results of these initial efforts are contained herein.

The charts were constructed using satellite imagery and conventional data rather than the current analysis was compared with available radiometer imagery, visual and (NOAA) satellites and microwave. The primary data sources. The Meteorological Satellite Program utilized. The 19.35 GHZ microwave NIMBUS V provided an ice source during the polar night seasons with adequate light, with 1 KM resolution and the NOAA 2, 3, and 4 satellites were due to seasonally small water.

The user of this publication effort prepared for operational regarding any aspect of the

ABSTRACT

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The ground truth of
polar ice fields on a
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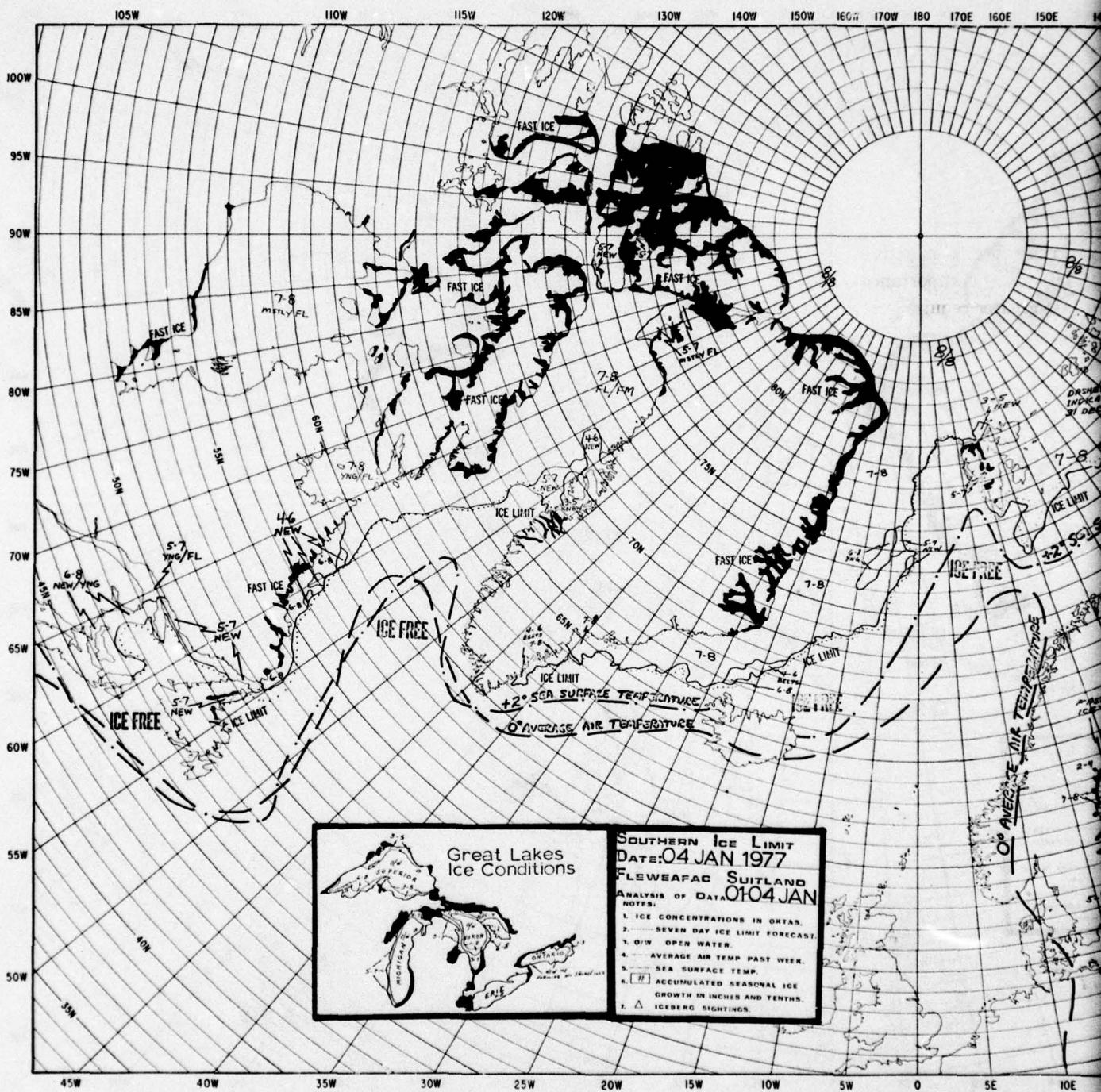
The charts were constructed by Navy ice analysts under operational time constraints from satellite imagery and conventional data. Reanalysis with late data was not normally attempted; rather the current analysis was prepared incorporating this to the extent possible. The analysis was compared with available climatology in an attempt to eliminate gross errors. Scanning radiometer imagery, visual and infrared, from the National Oceanic and Atmospheric Administration (NOAA) satellites and microwave radiometer data from the NIMBUS V research satellite were the primary data sources. Limited use of the Earth Resources LANDSAT and Defense Meteorological Satellite Program (DMSP) imagery as well as conventional observations were utilized. The 19.35 GHZ microwave radiometer with 25 kilometer (KM) resolution aboard NIMBUS V provided an ice edge and limited inner pack conditions. This was the basic data source during the polar night and over areas dominated by persistent cloud cover. During the seasons with adequate light, visual data from the Very High Resolution Radiometer (VHRR) with 1 KM resolution and the 4 KM resolution data from the Scanning Radiometer aboard NOAA 2, 3, and 4 satellites were utilized. Infrared radiometer data was of limited value primarily due to seasonally small water-ice temperature differences.

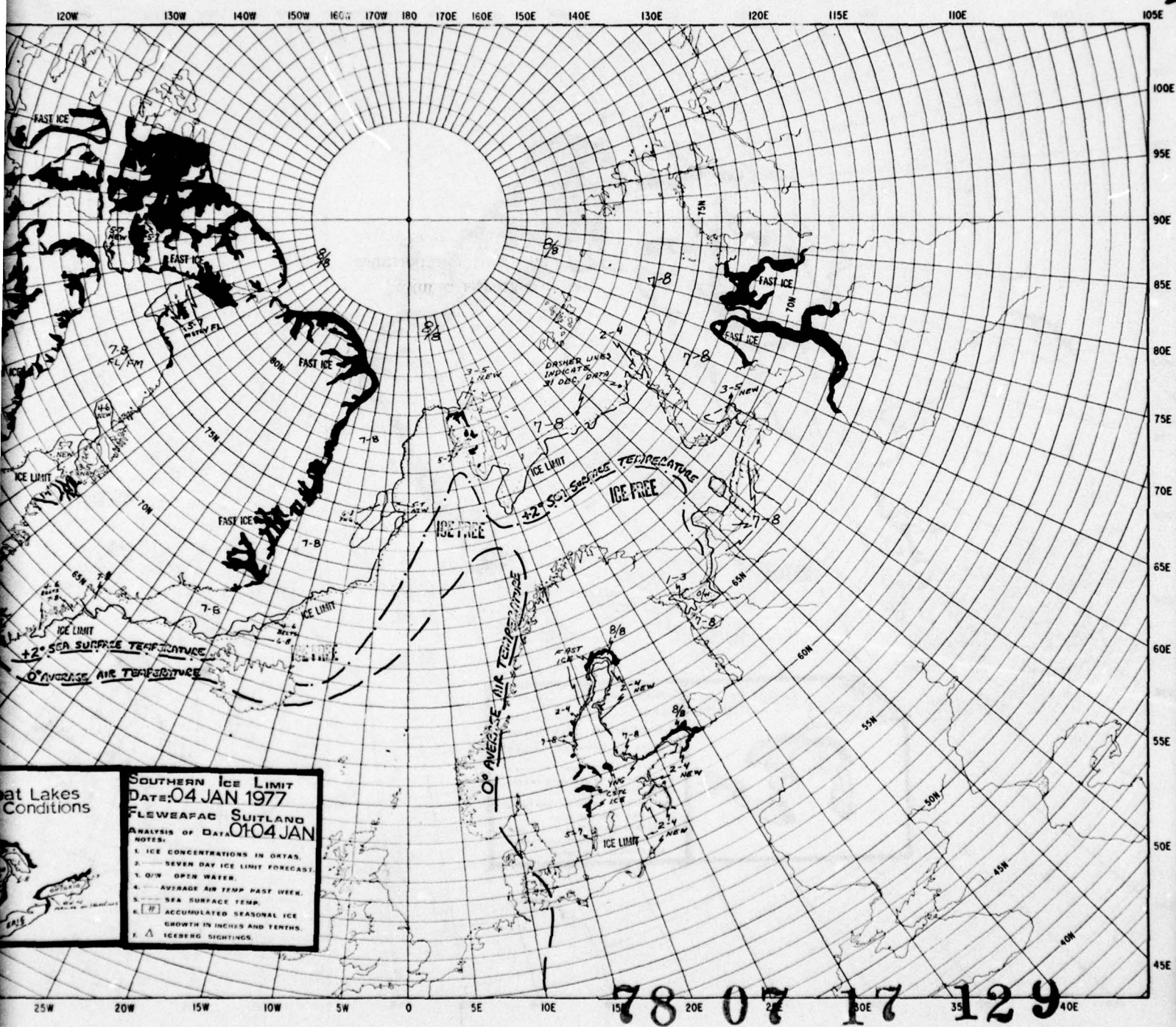
The user of this publication is reminded that the information presented reflects an initial effort prepared for operational use and should temper his application accordingly. Comments regarding any aspect of the analysis effort are welcomed.

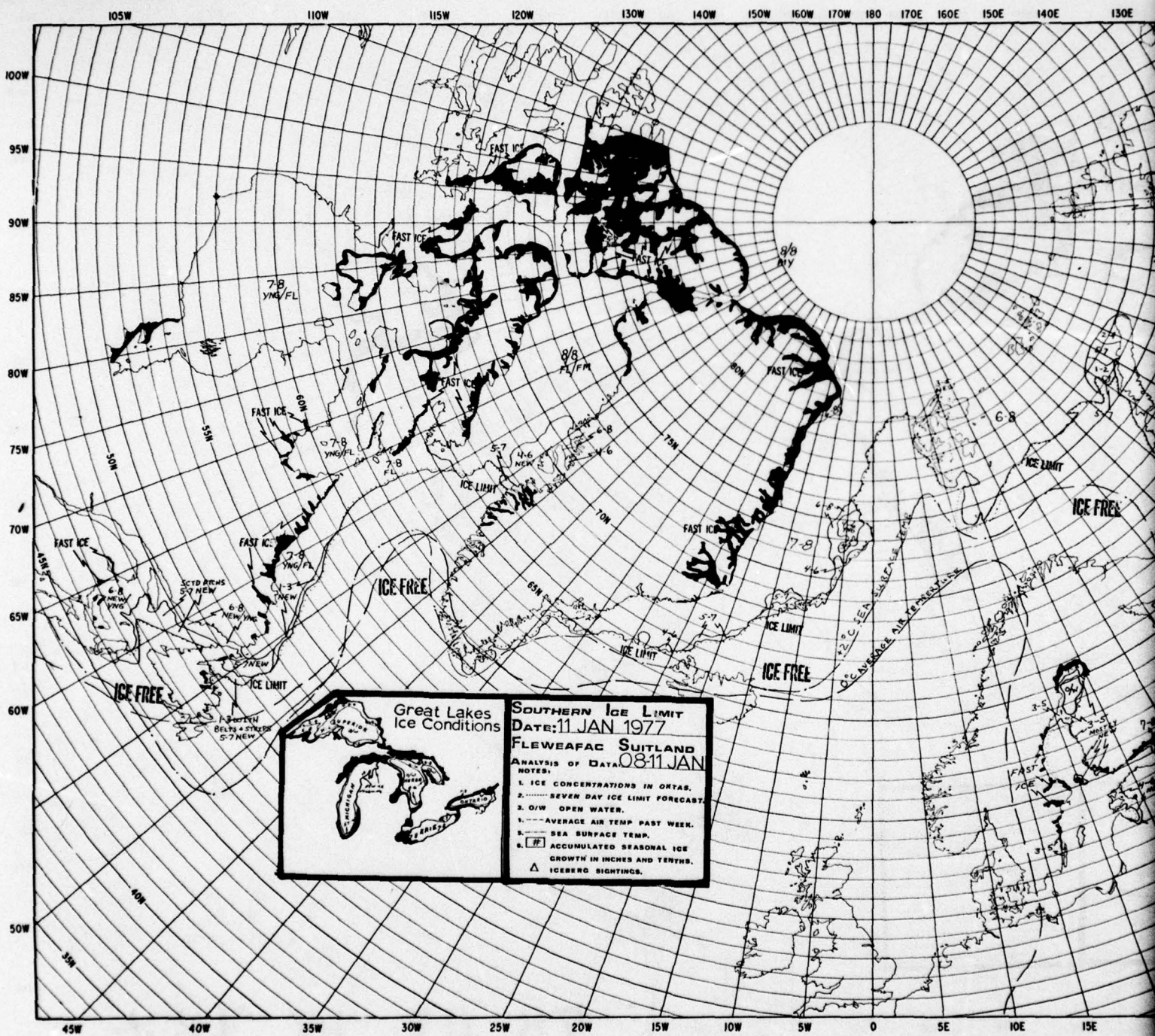
JOHN A. JEPSON
Captain, U. S. Navy
Commanding Officer
Fleet Weather Facility
Suitland, Maryland

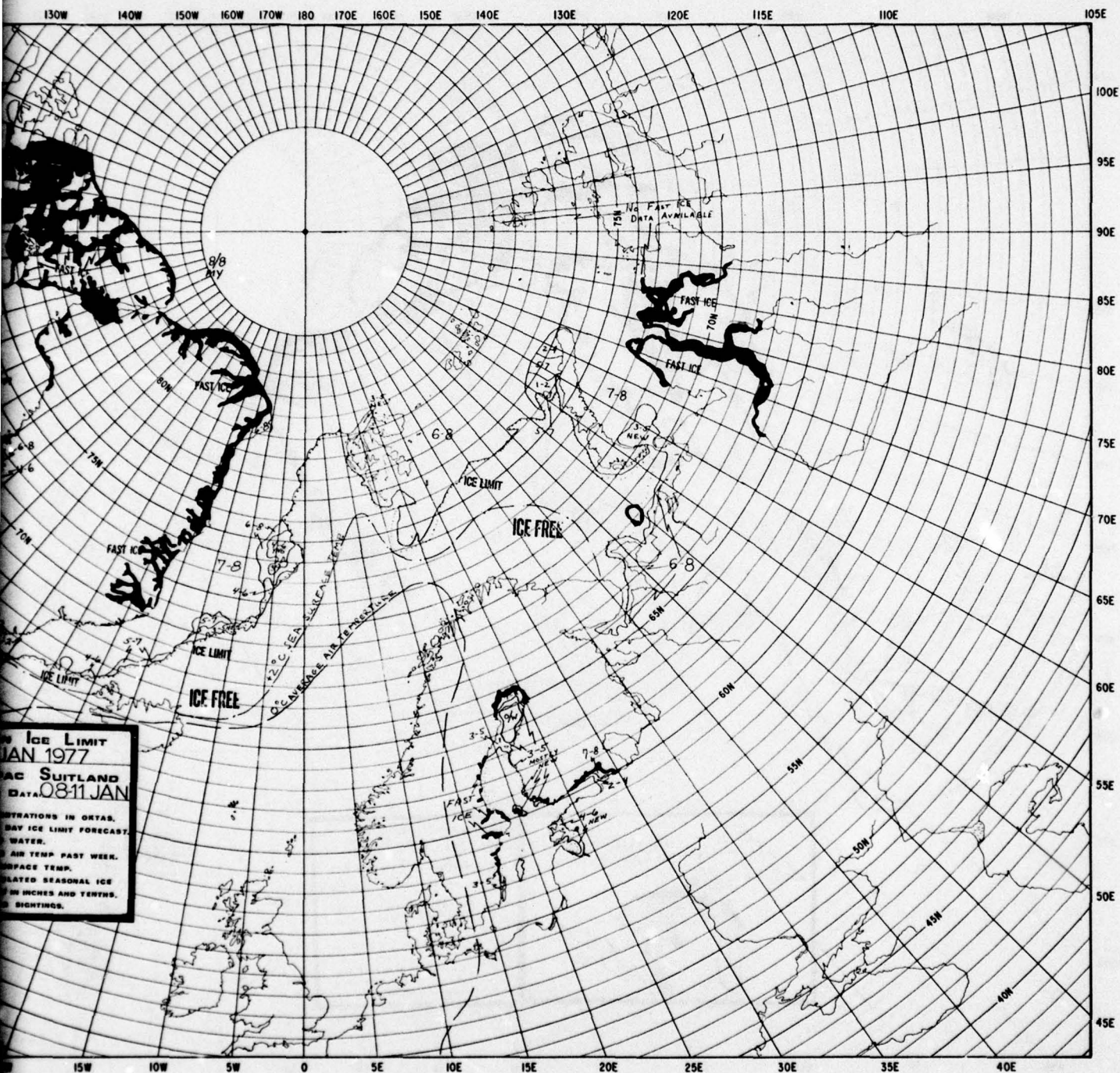
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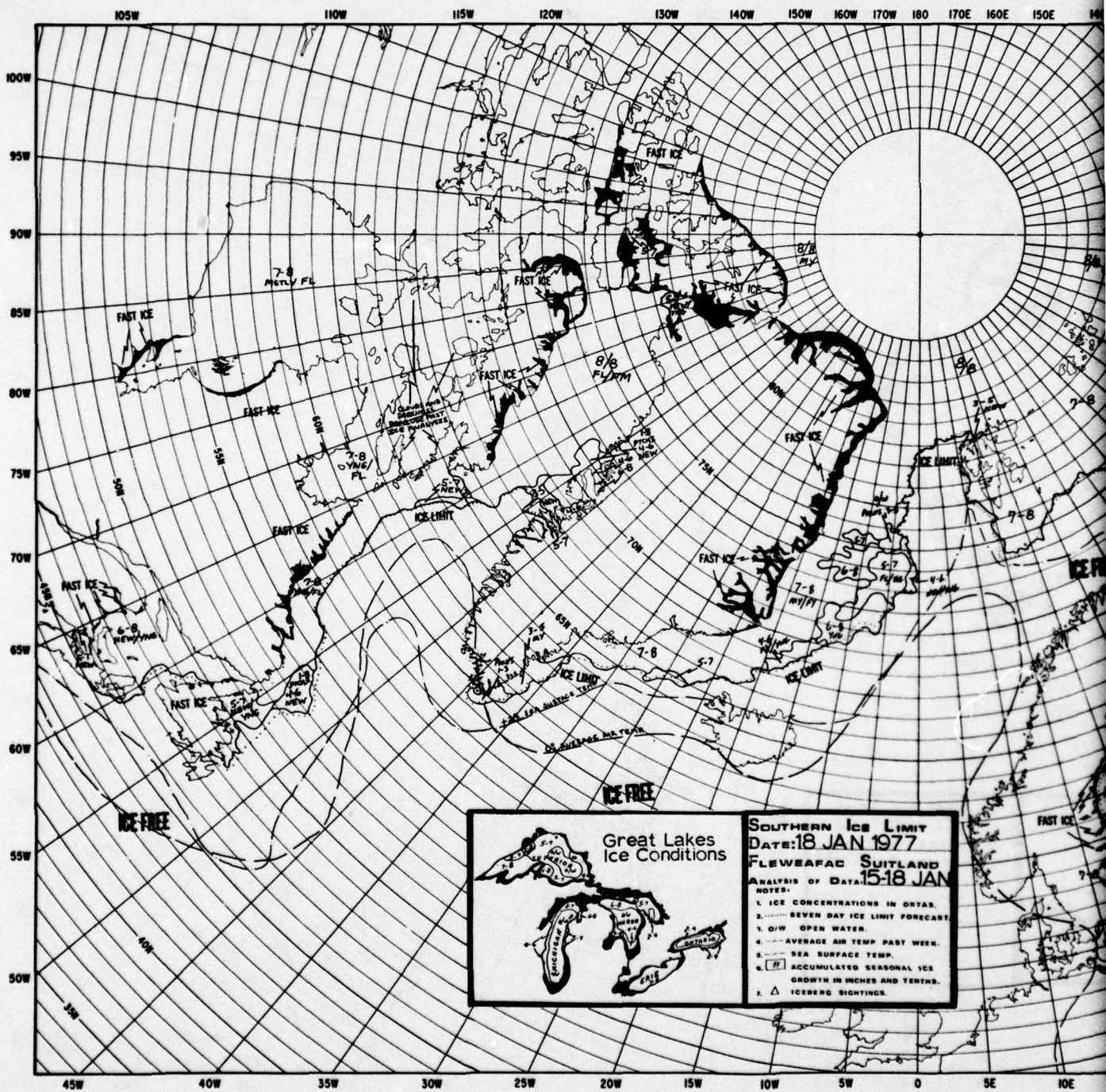
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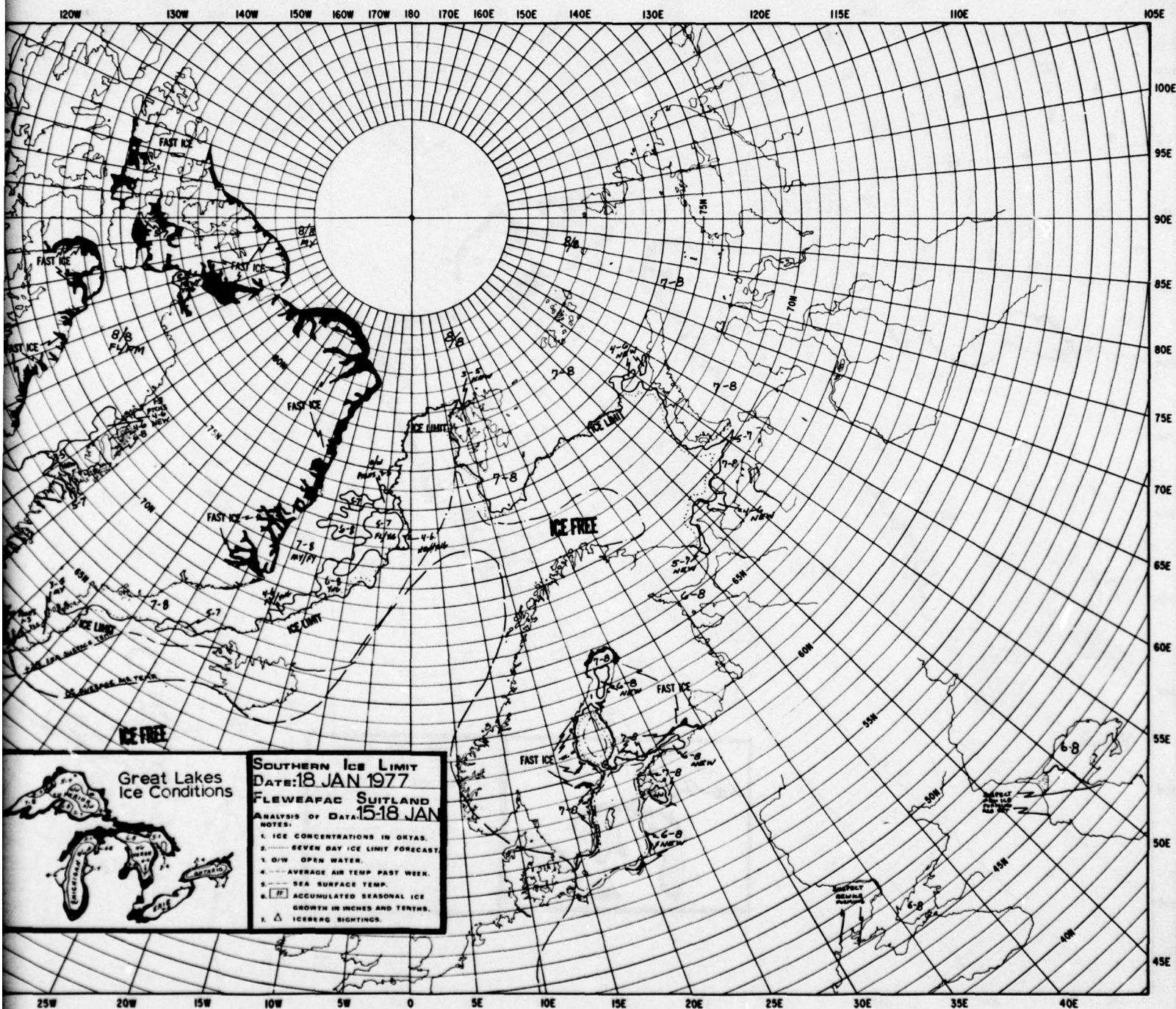


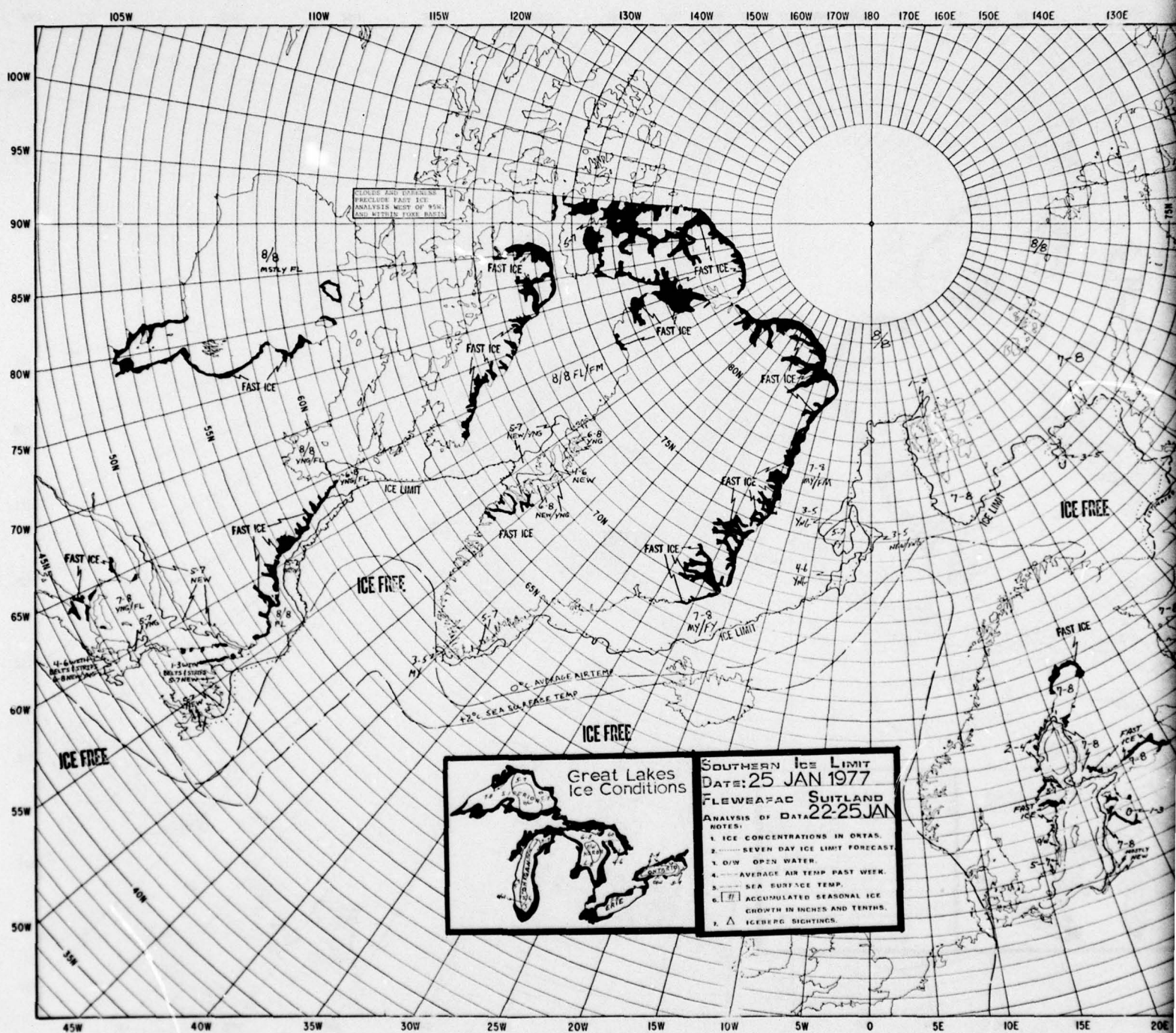


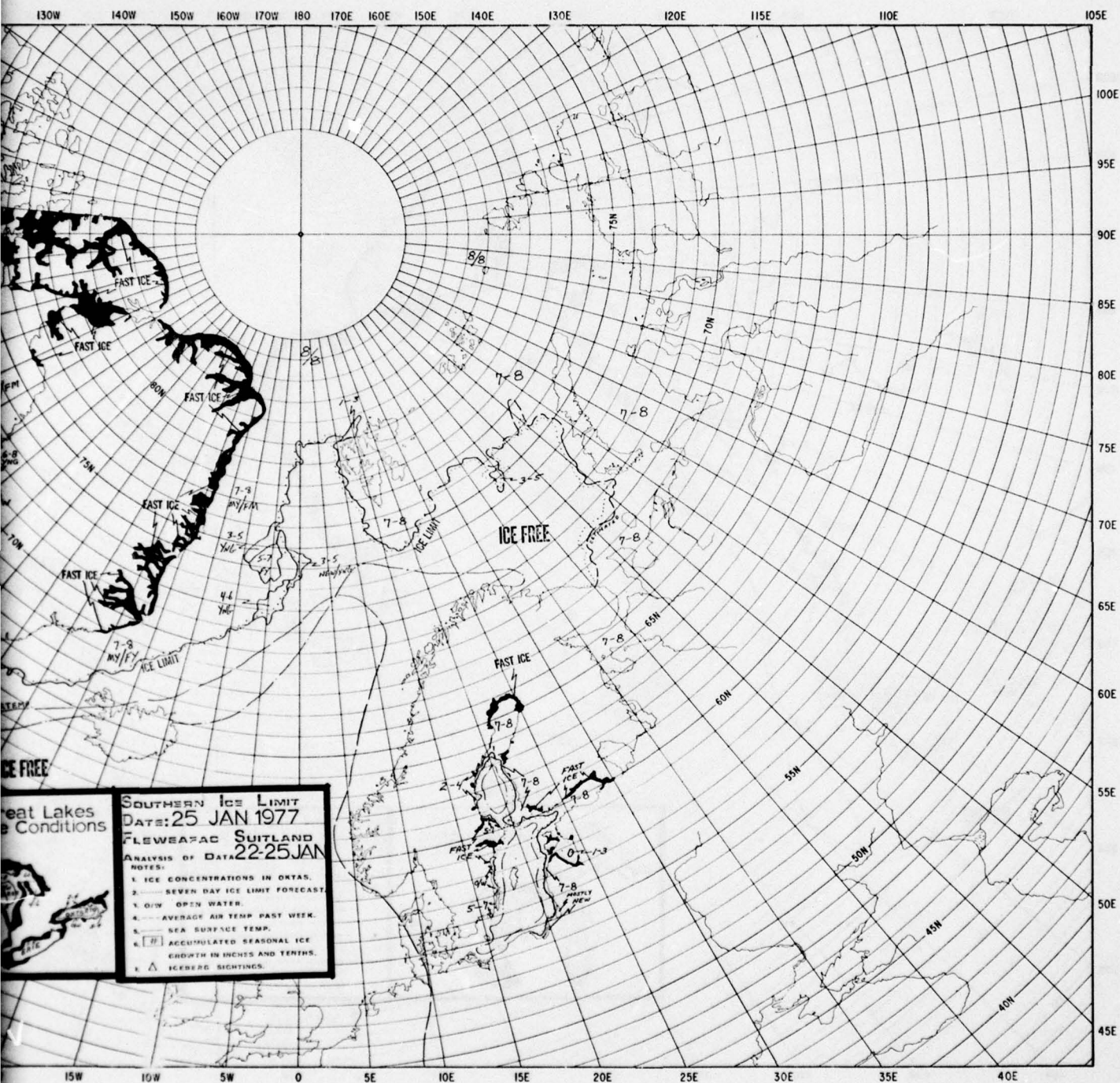


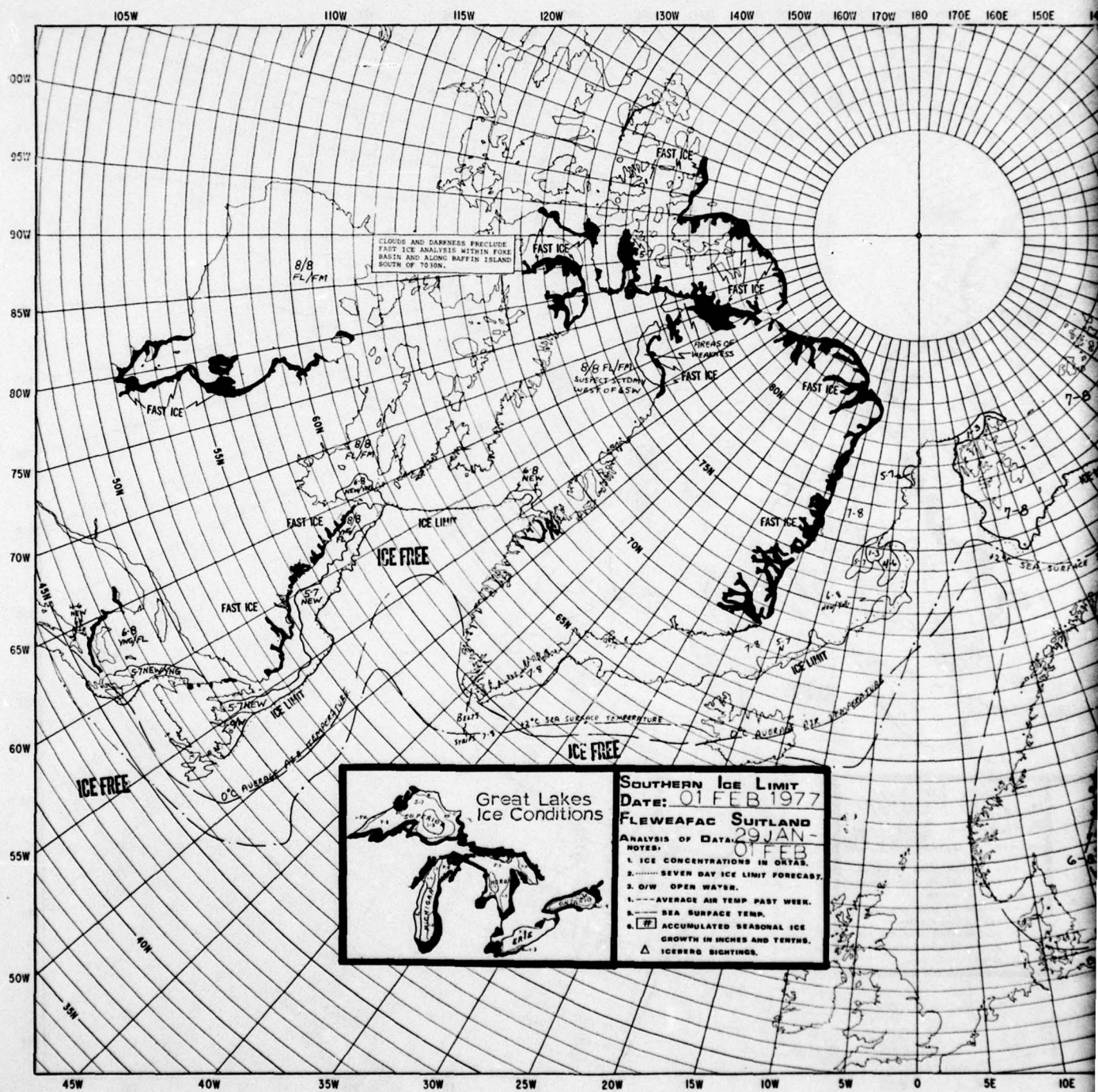


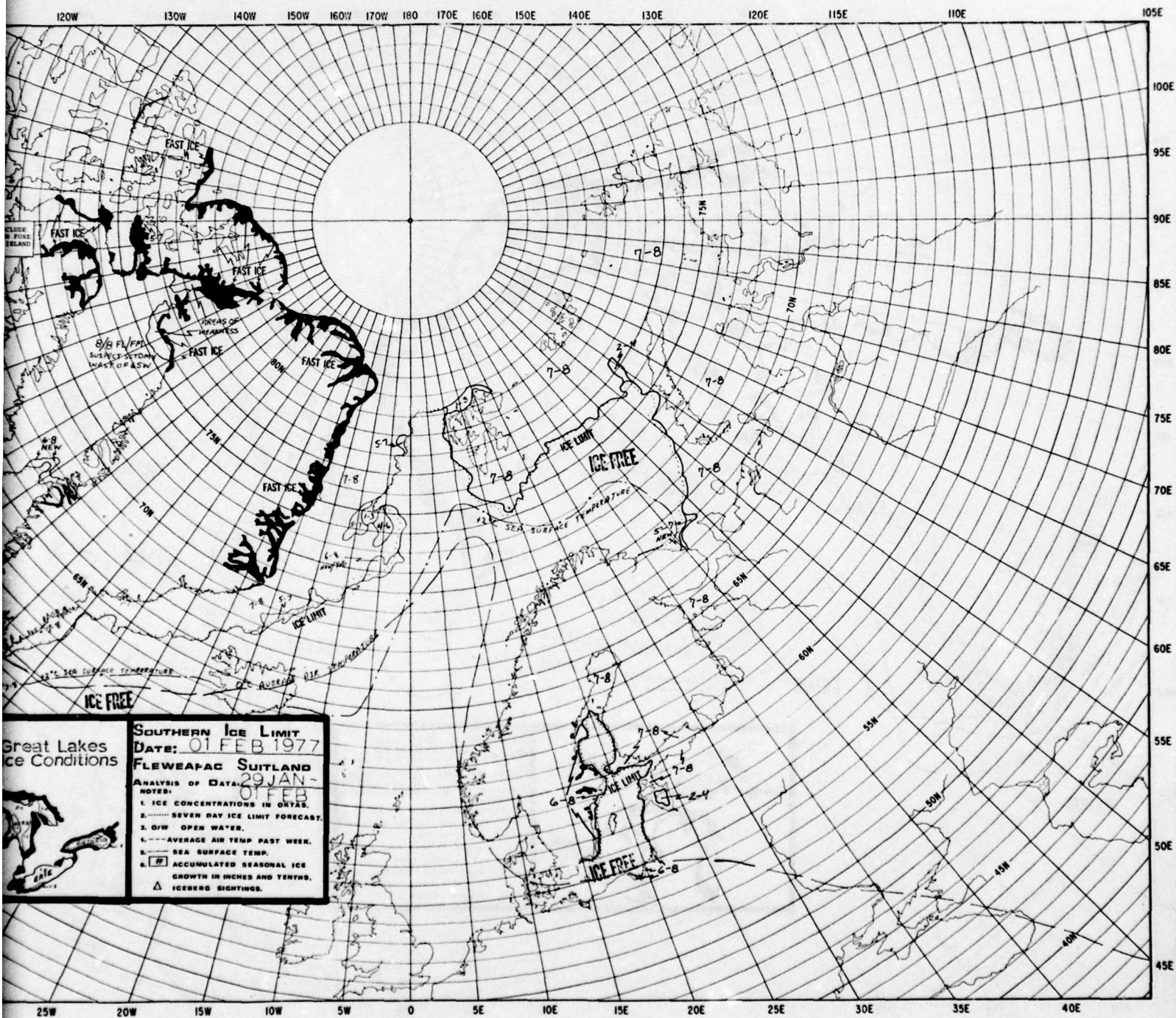


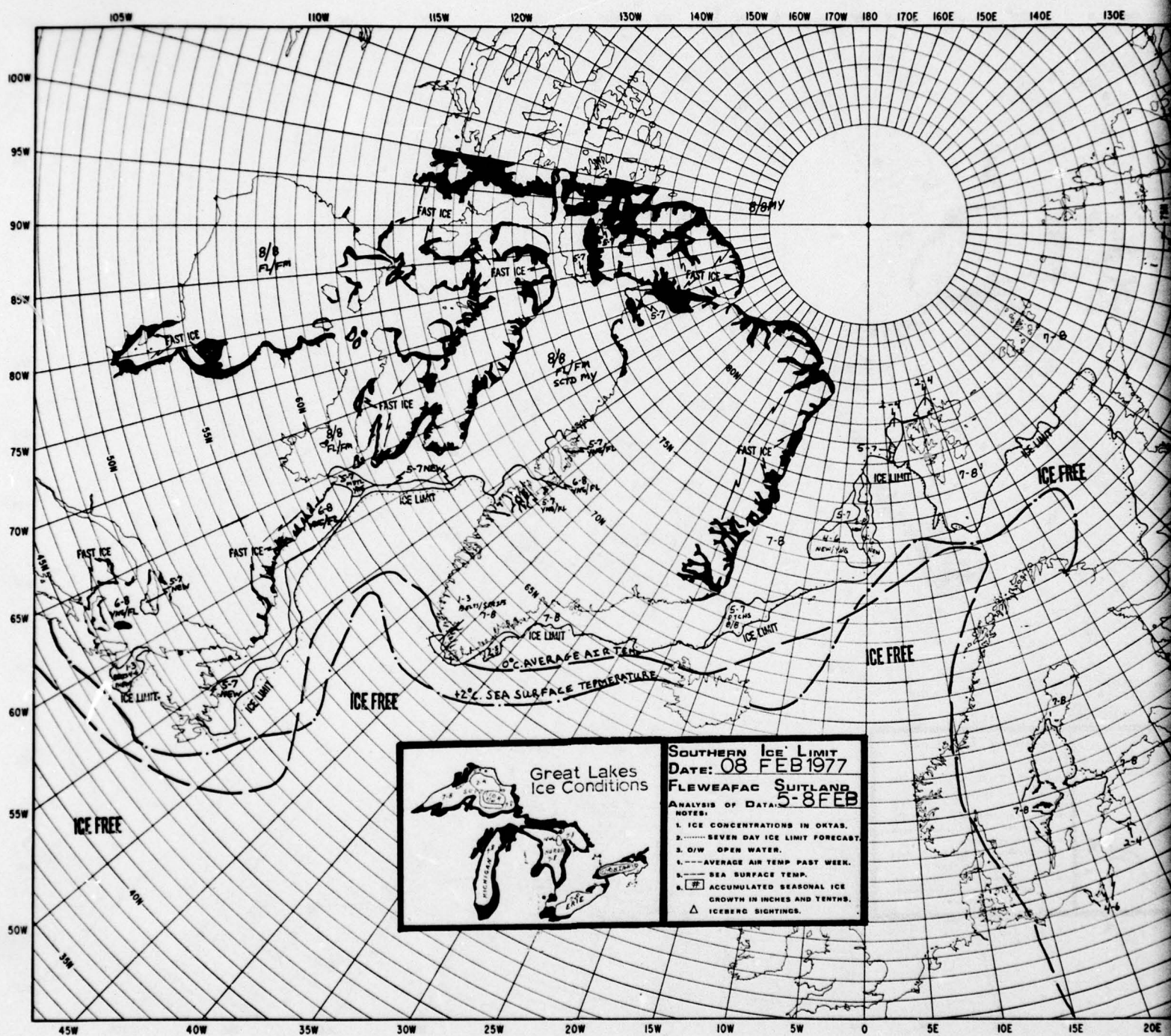


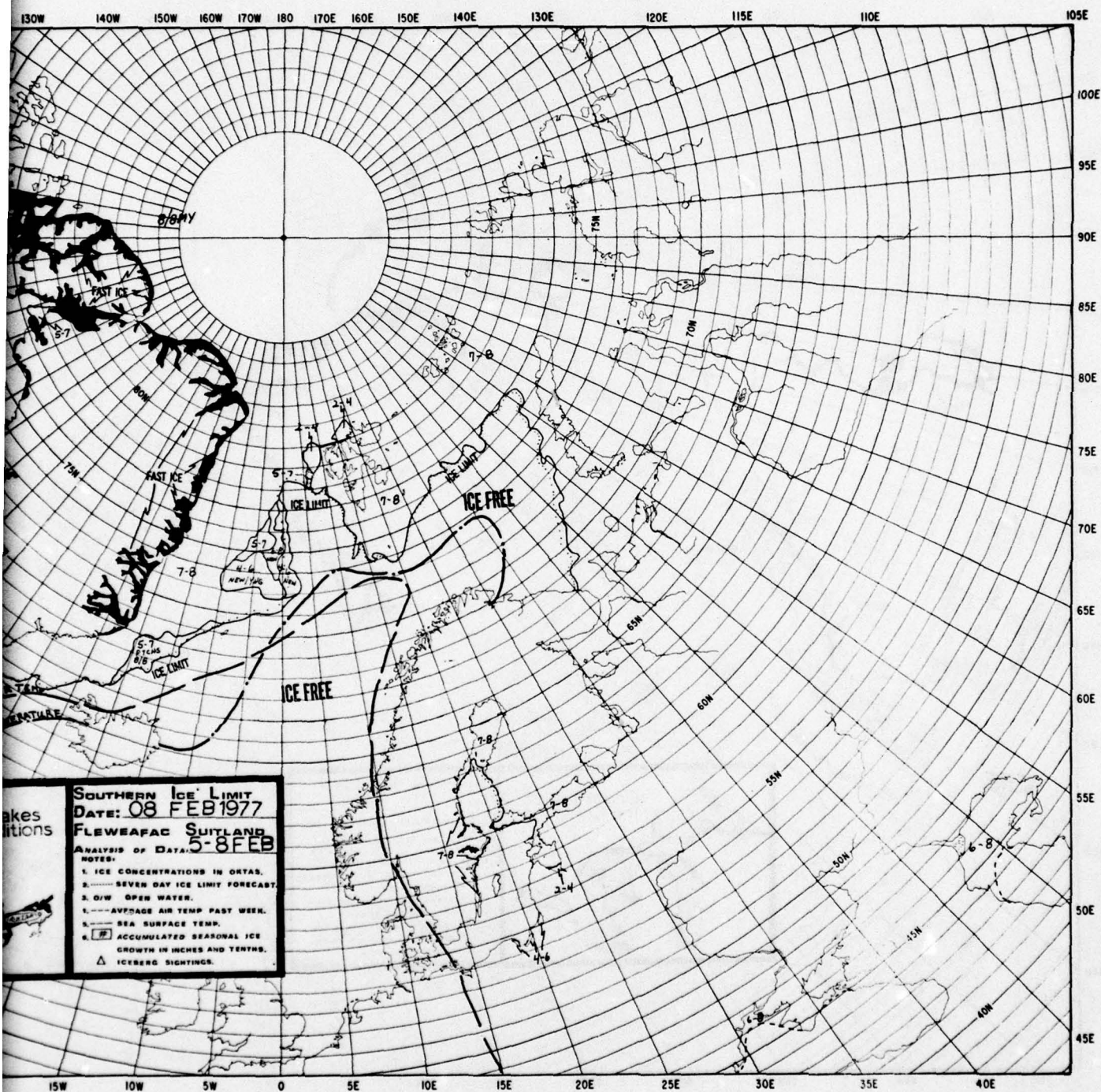


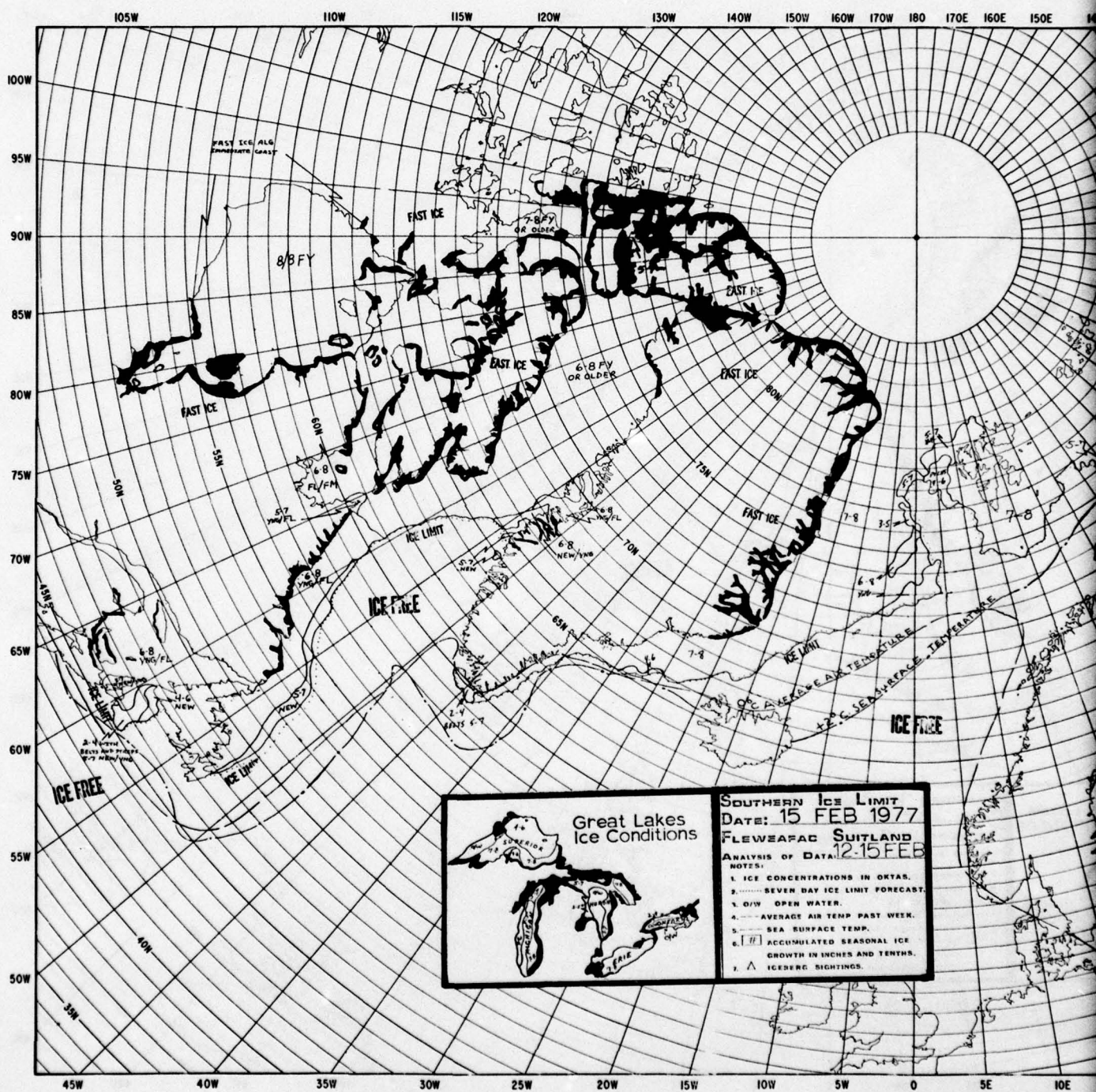


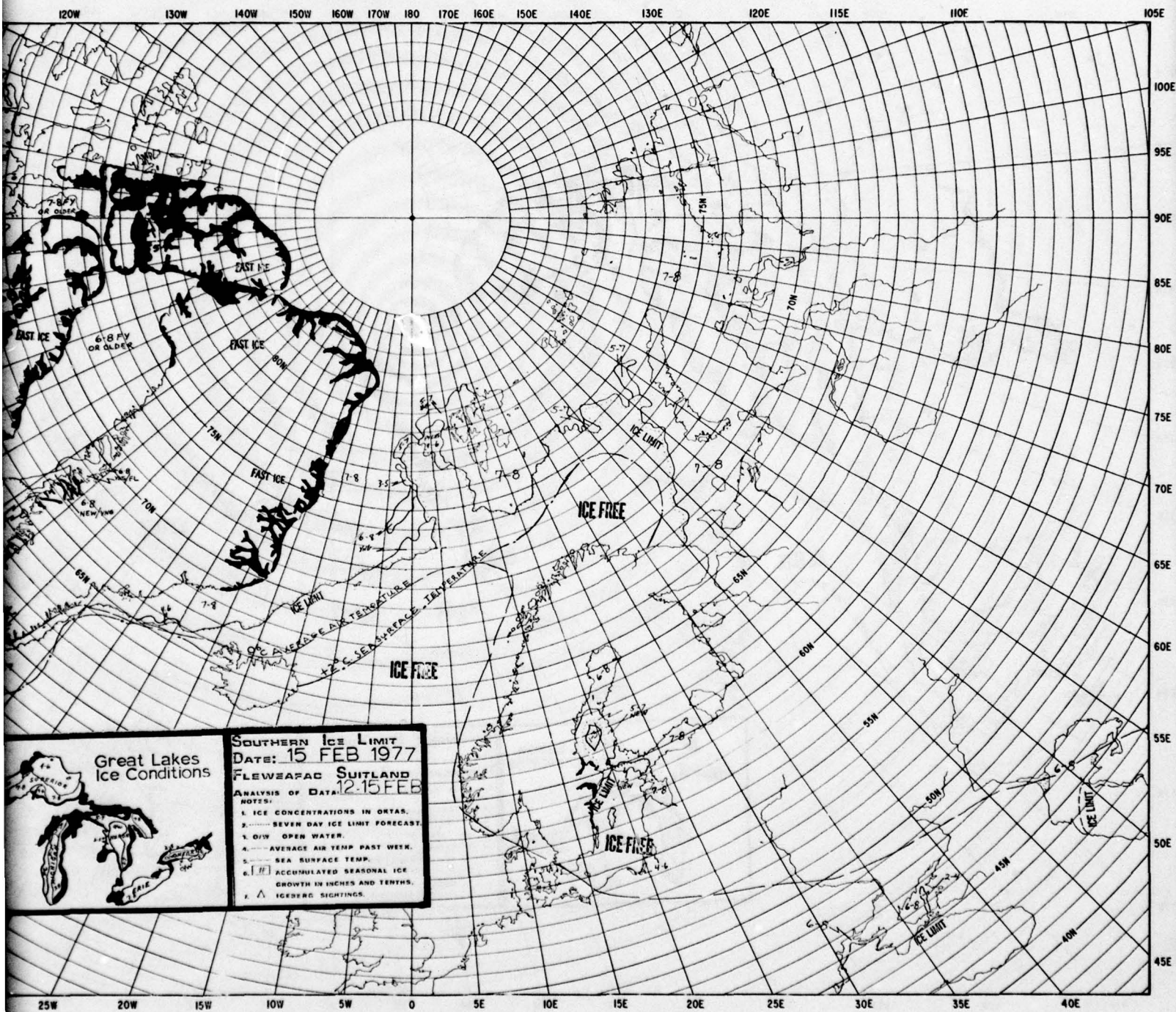


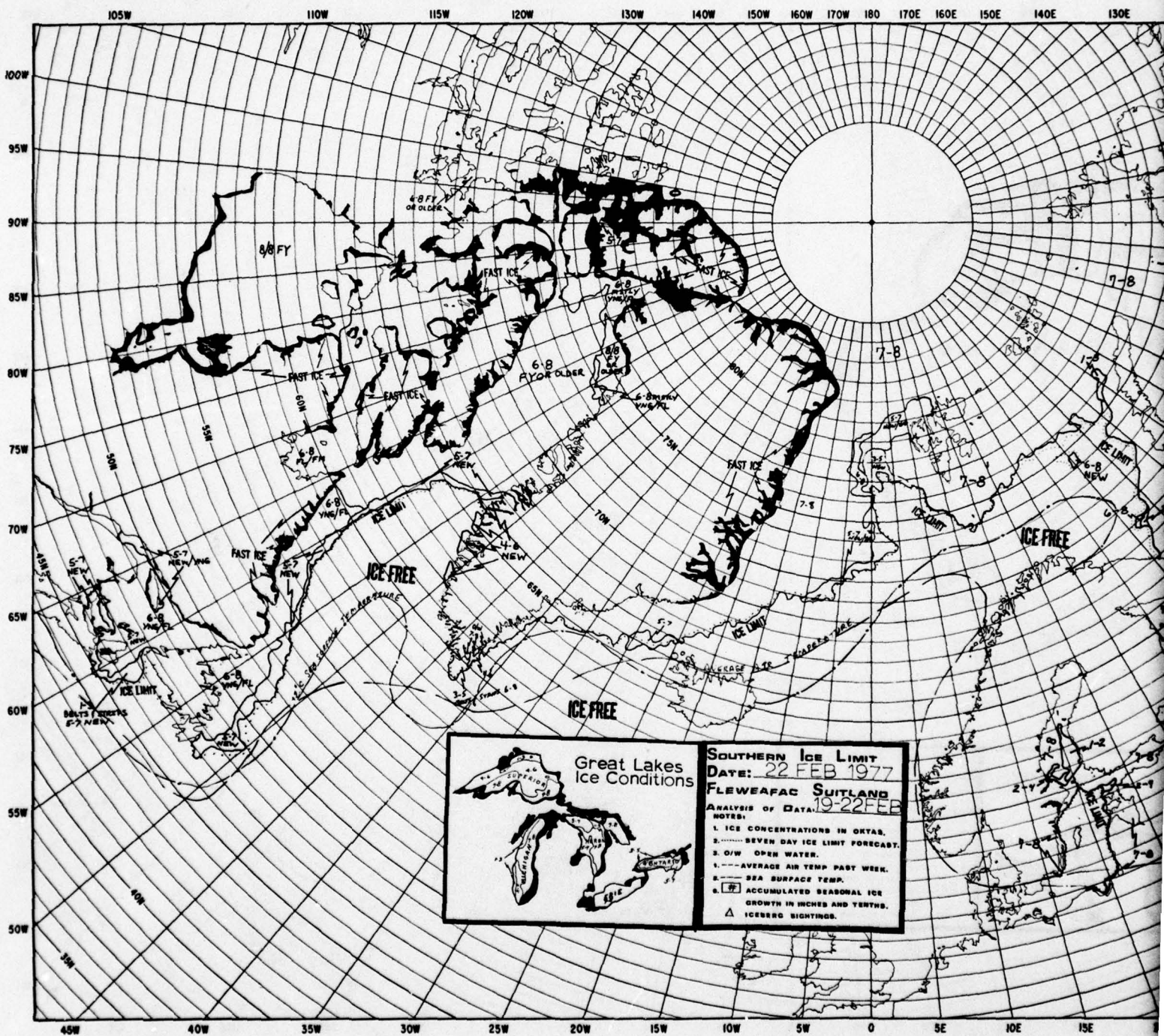


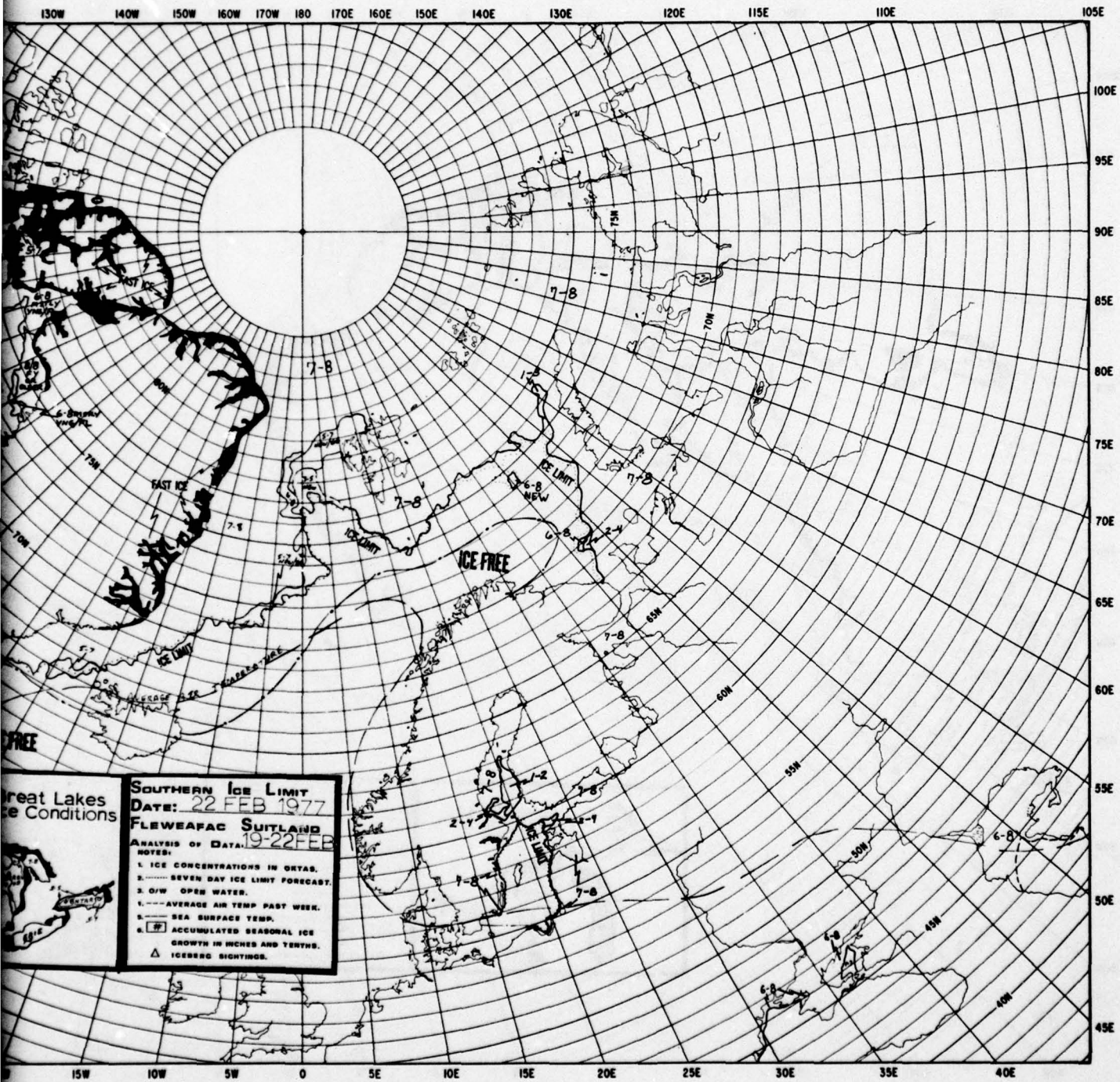


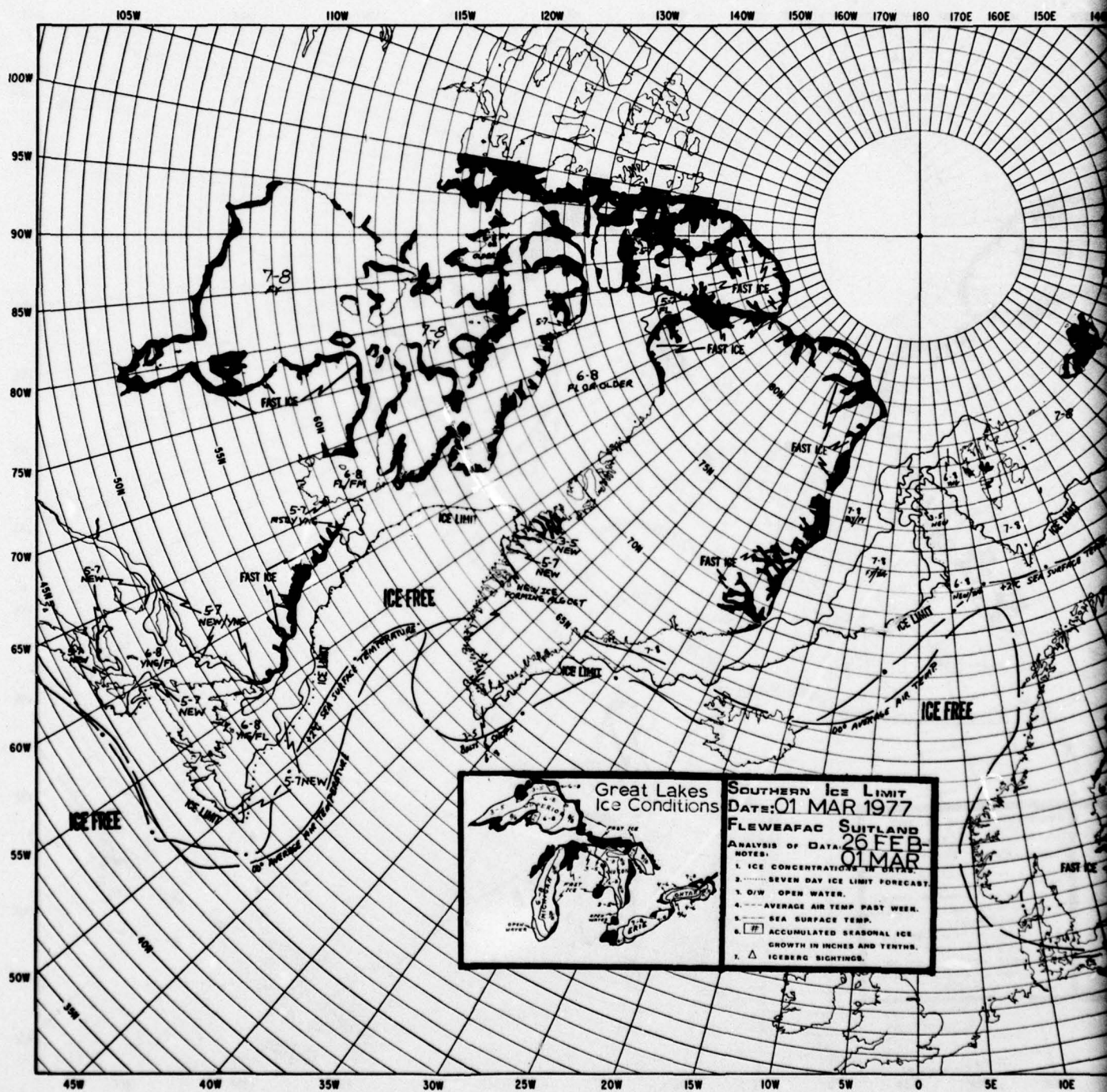


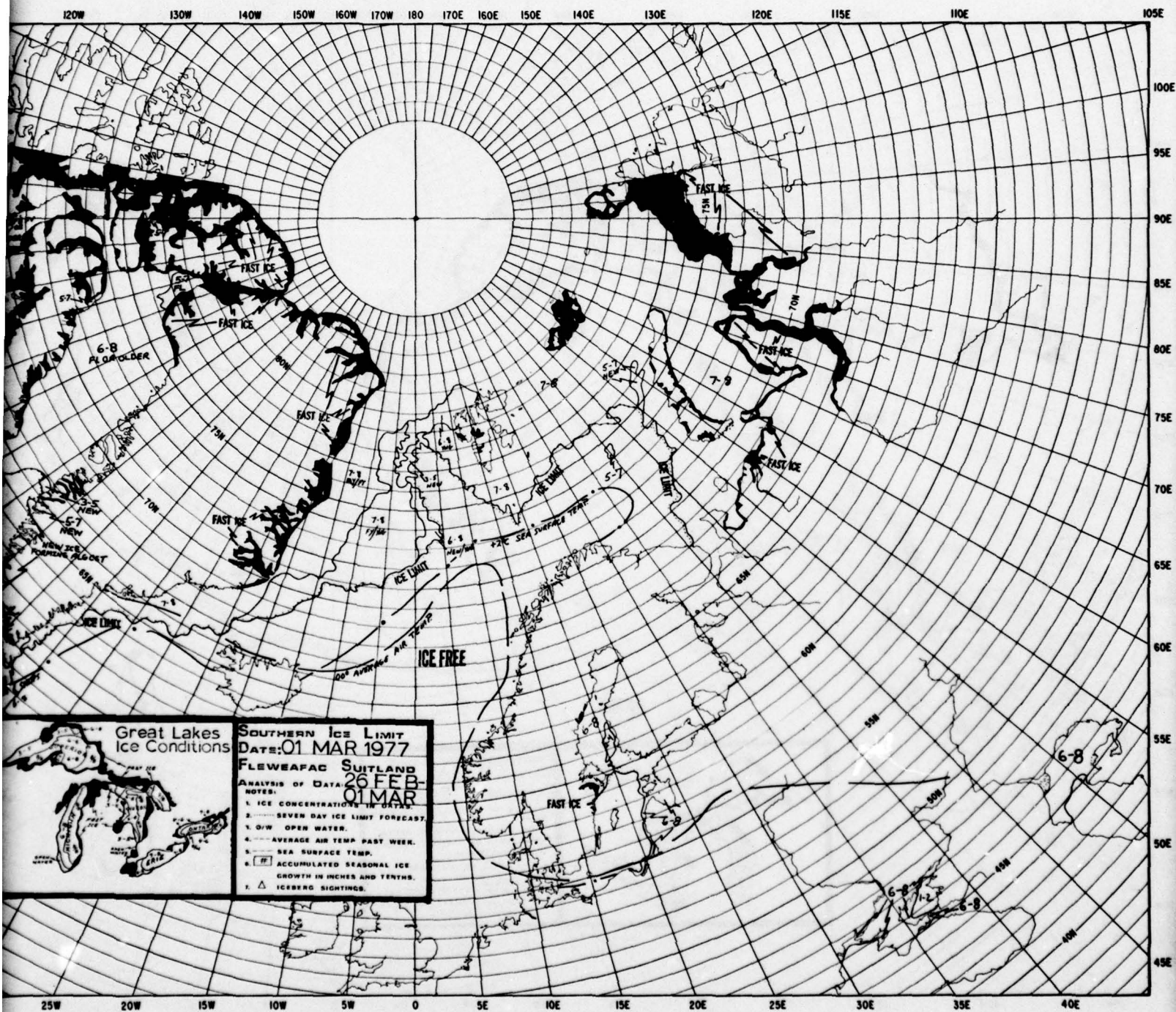


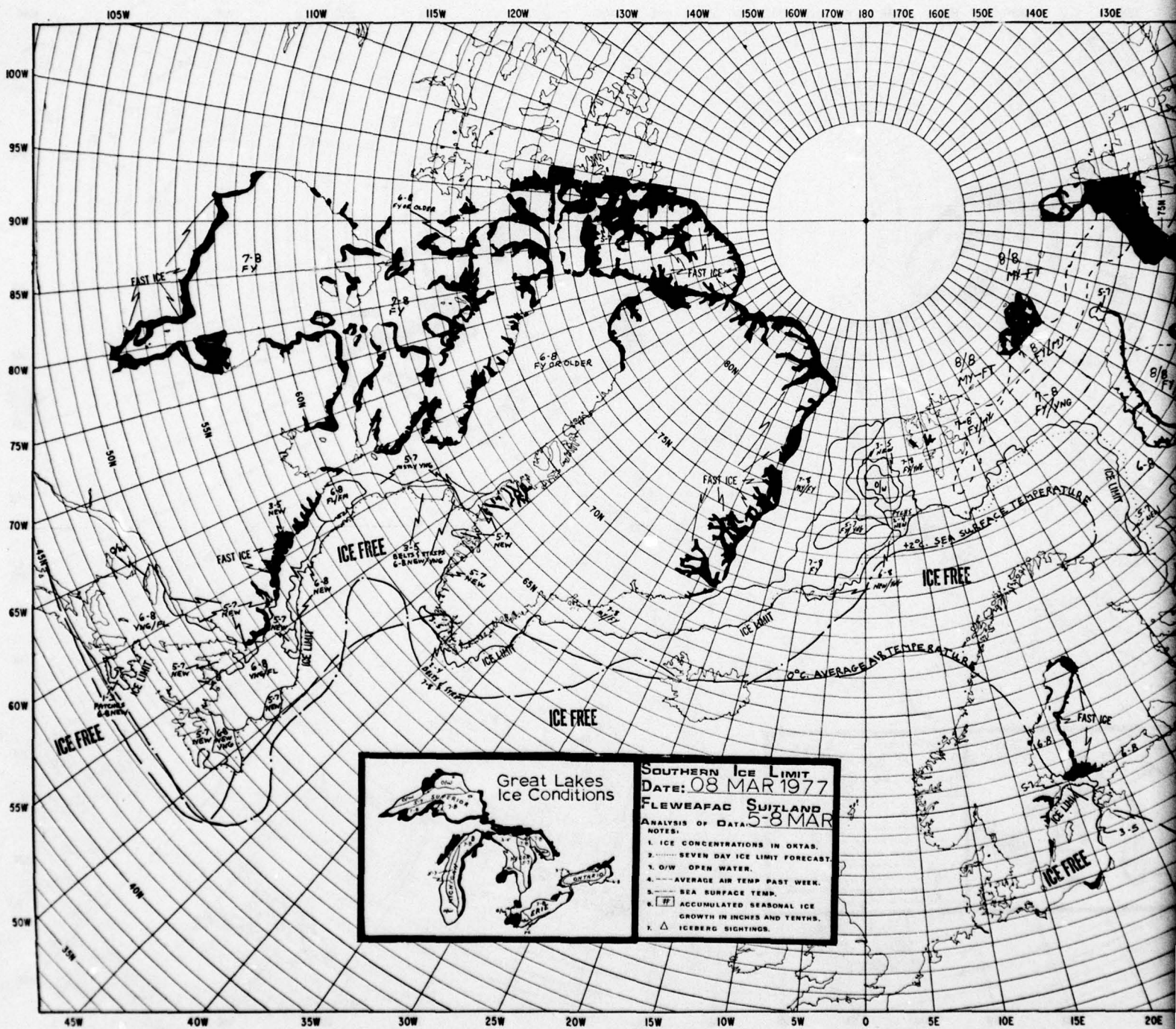


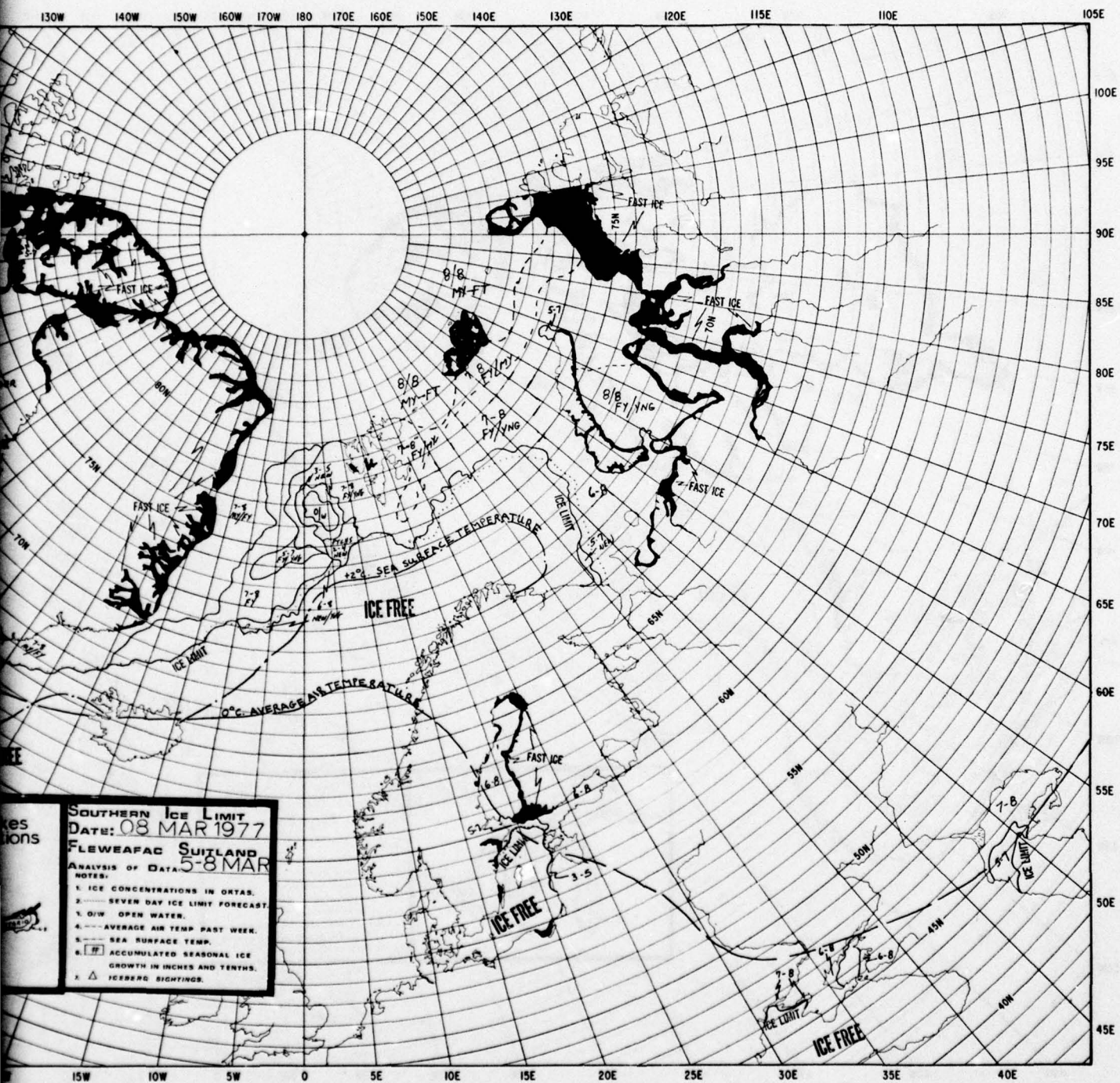


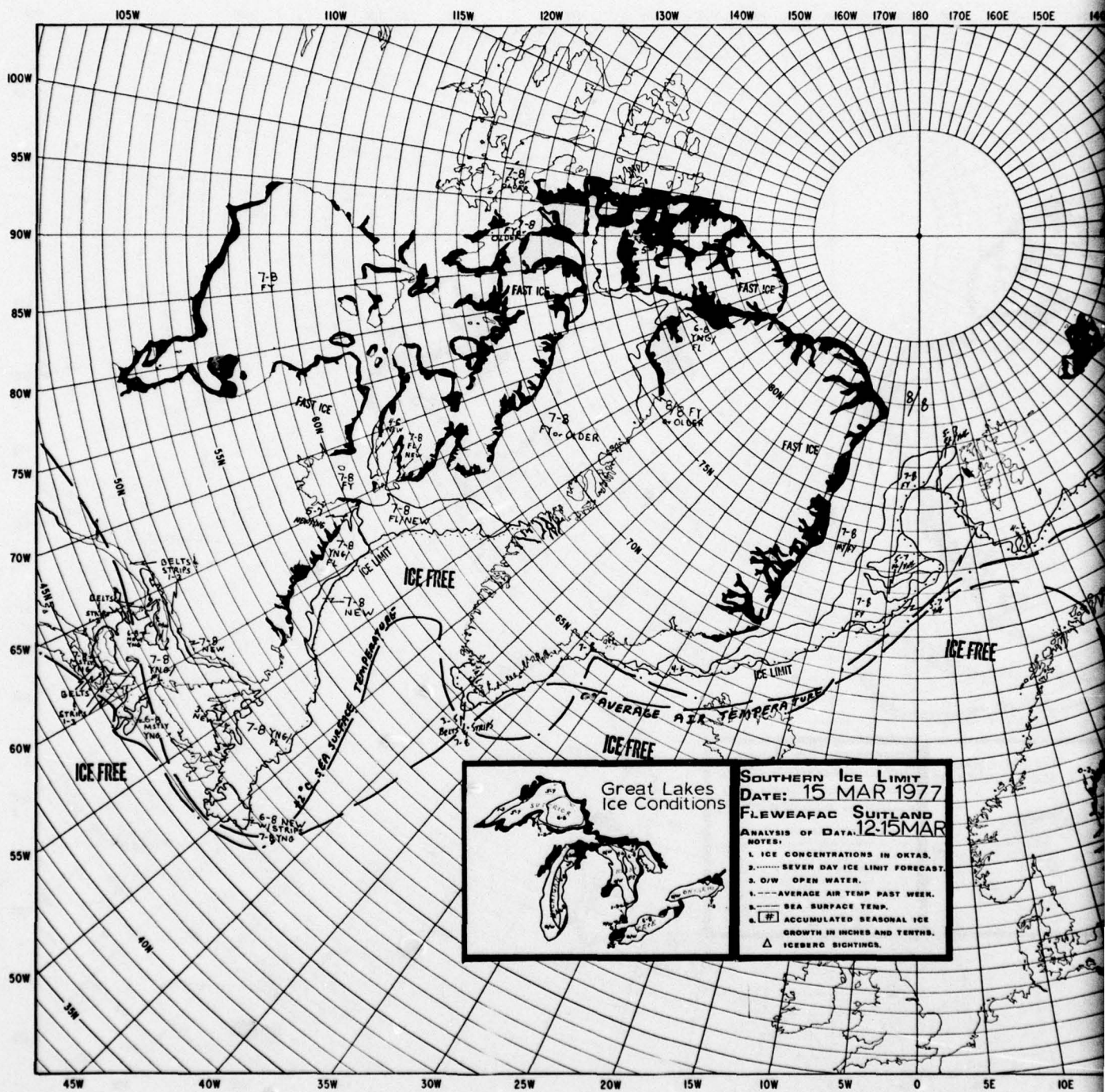


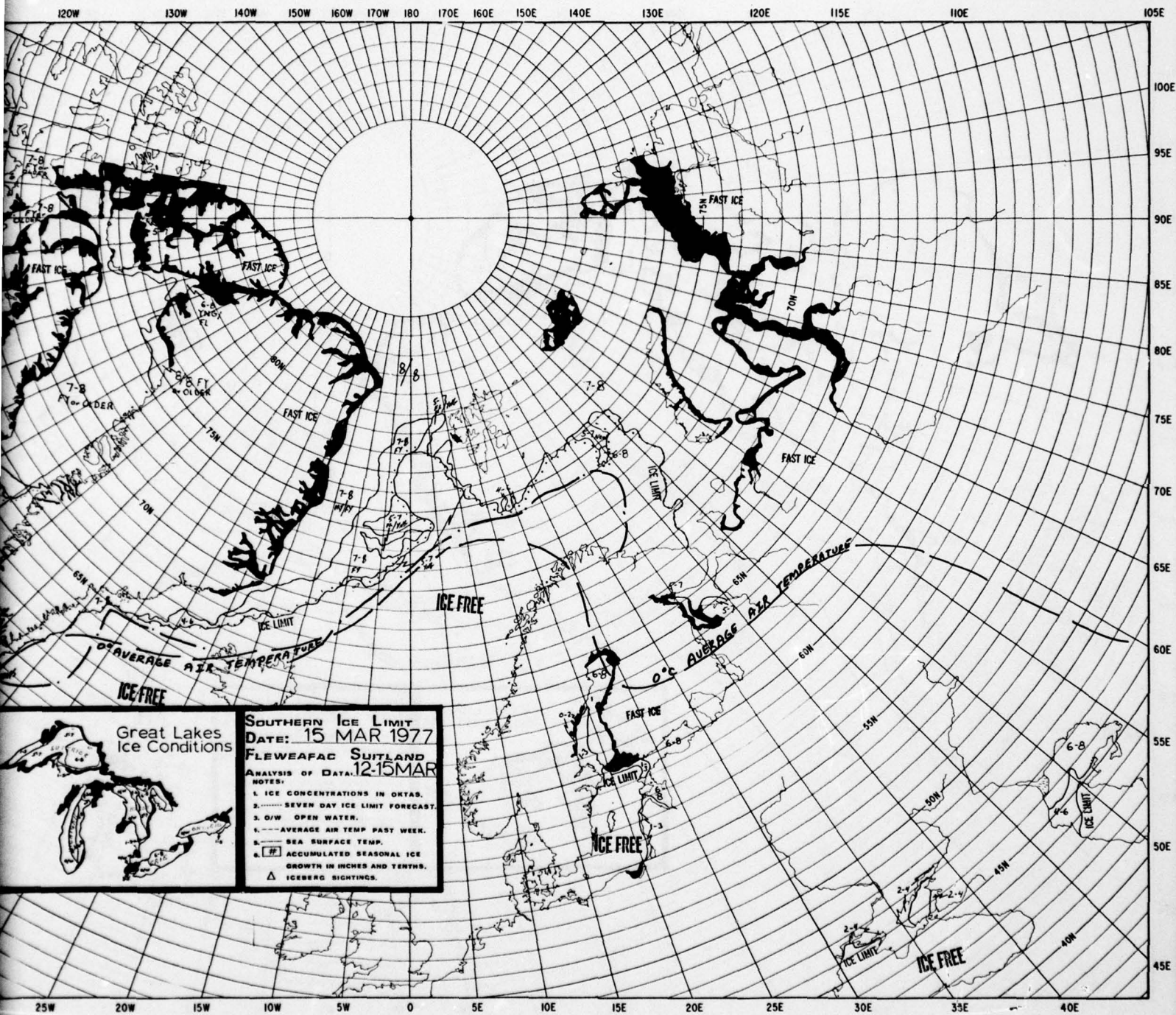


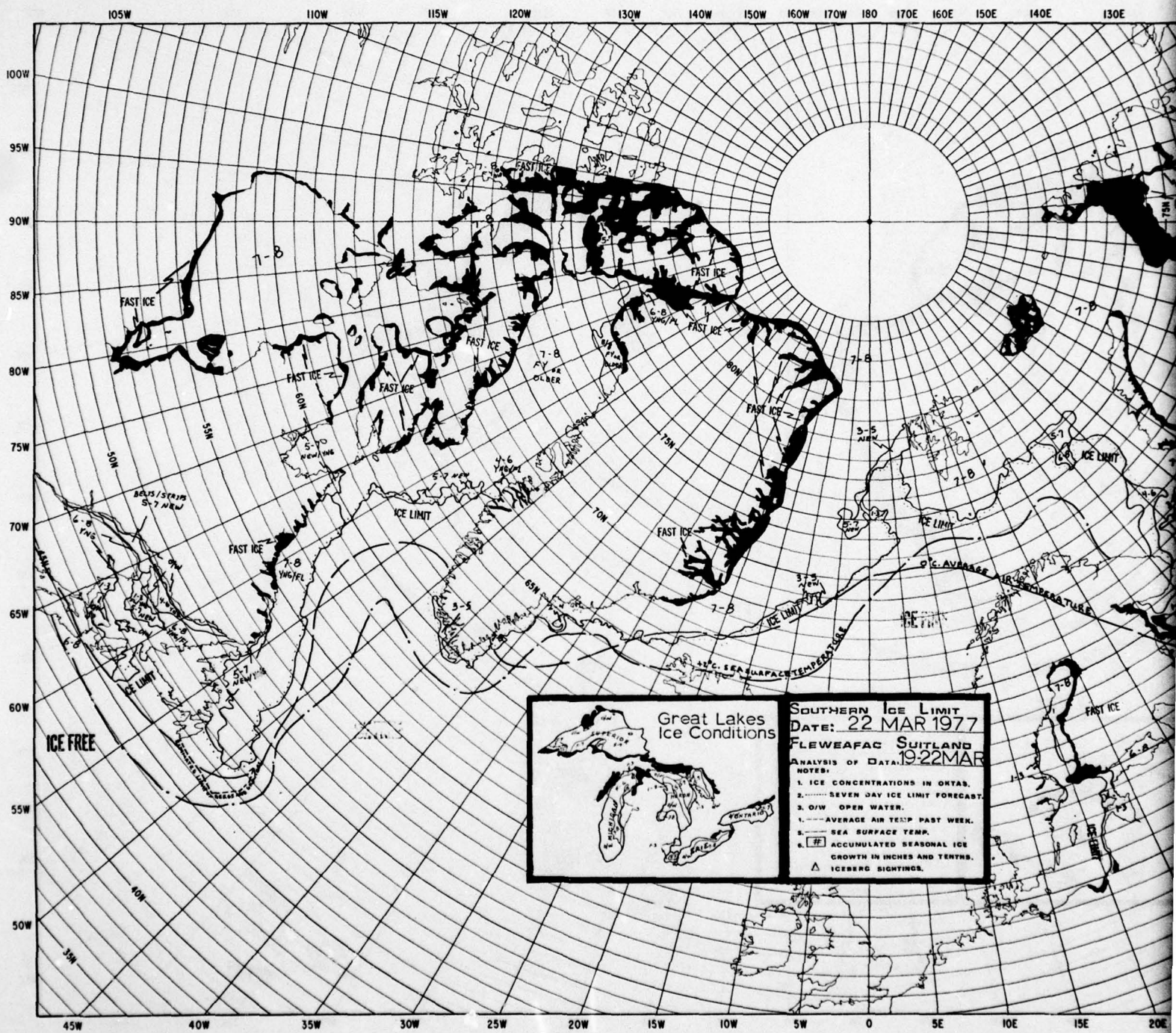


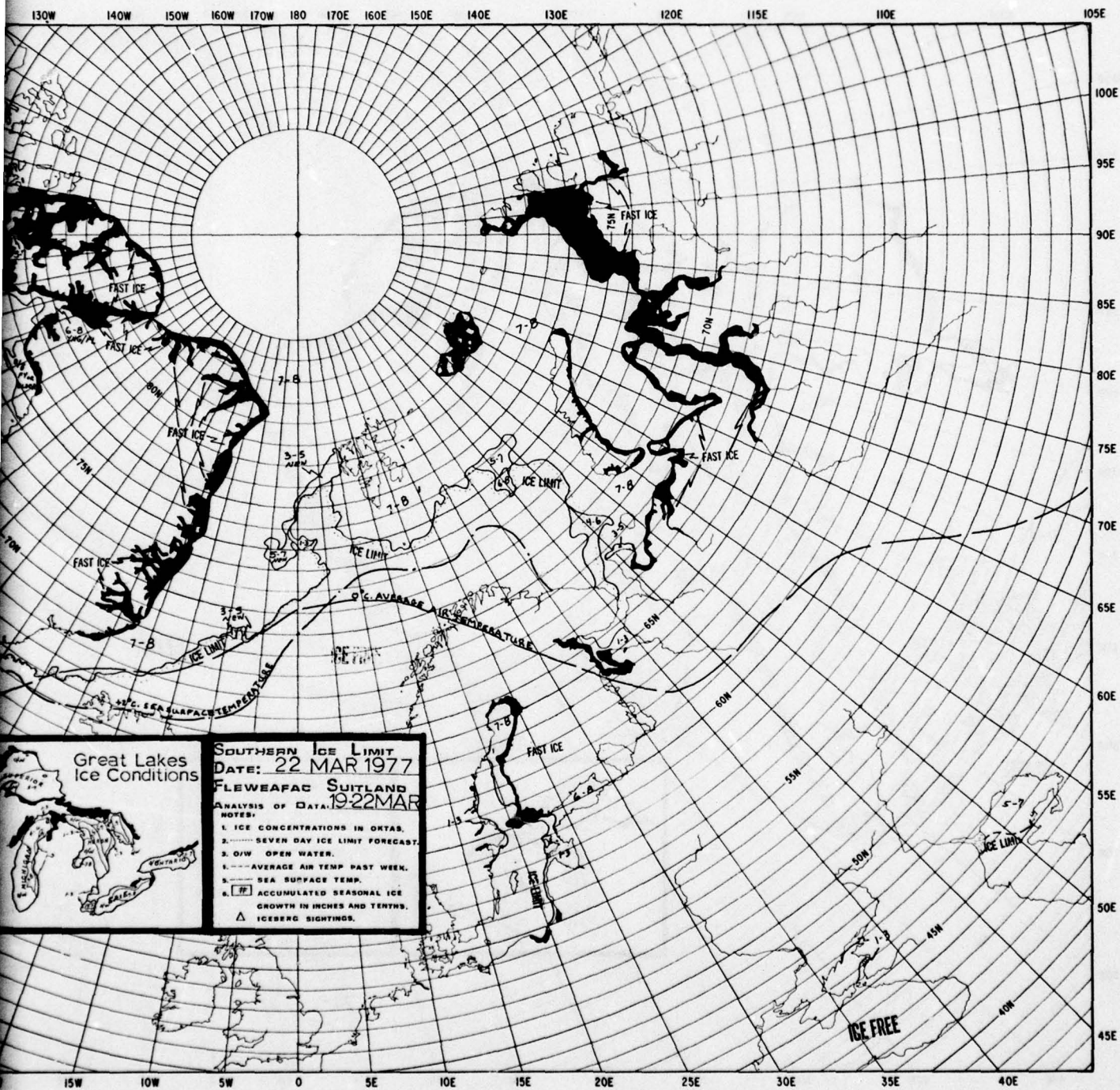


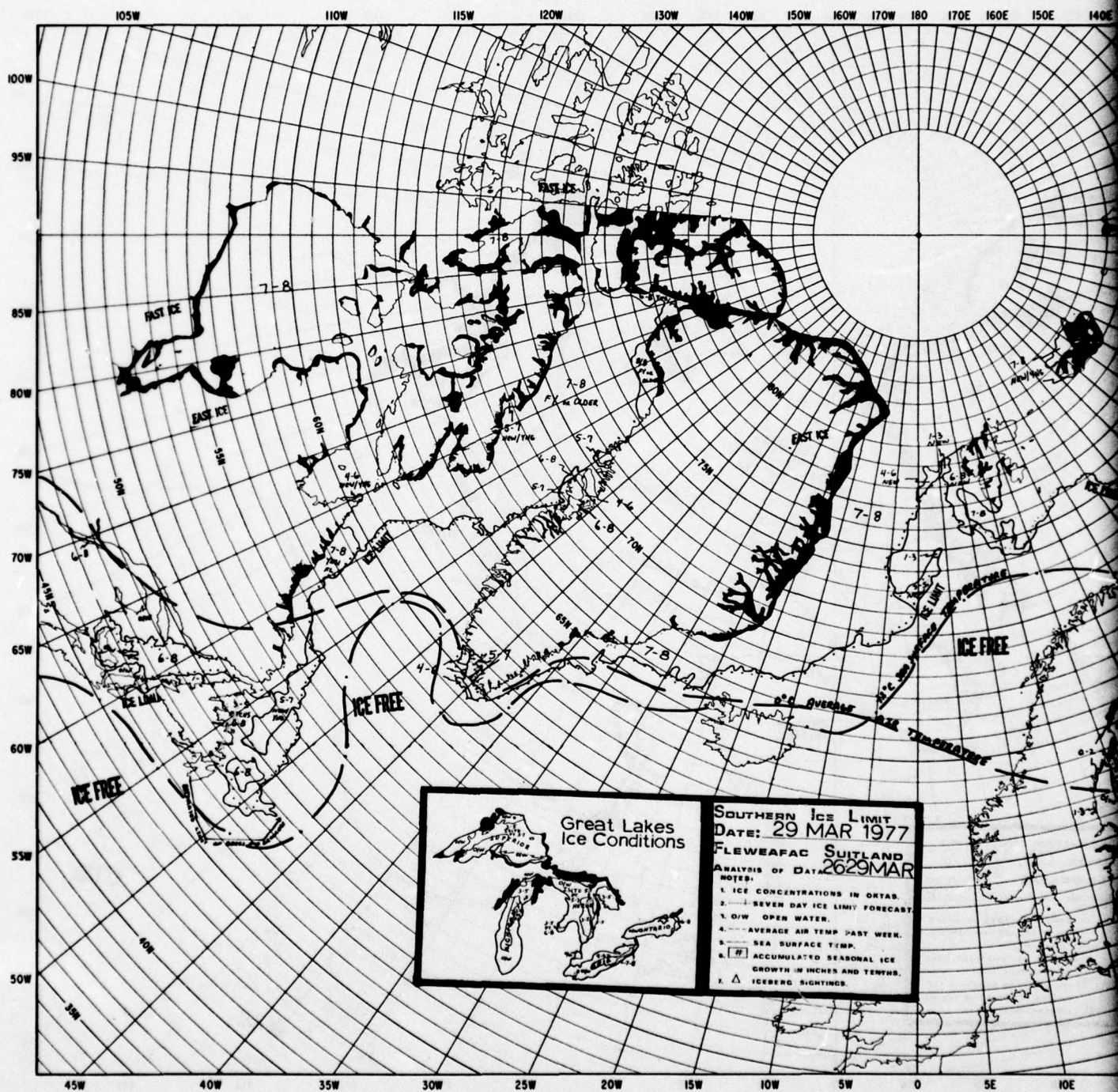


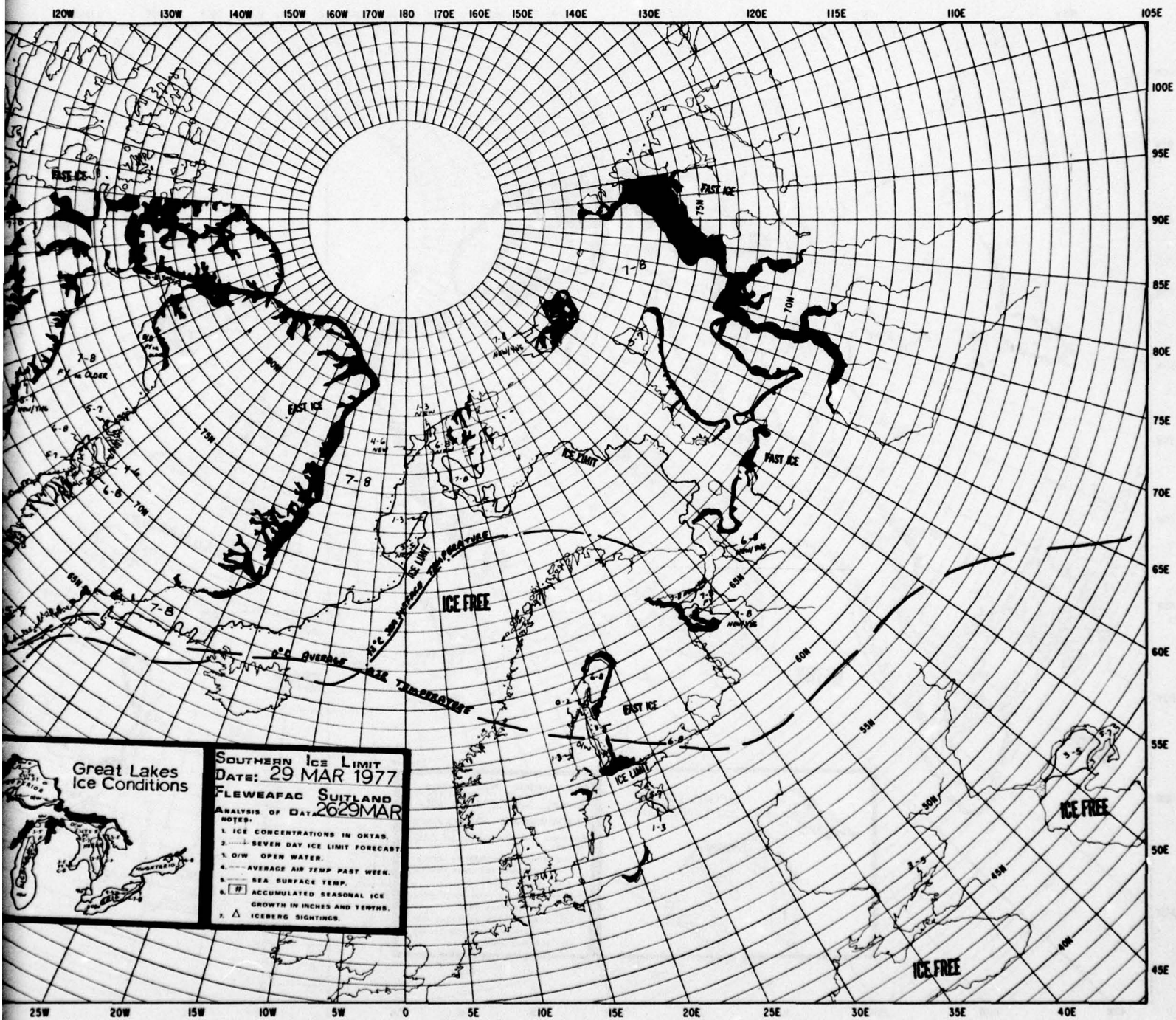


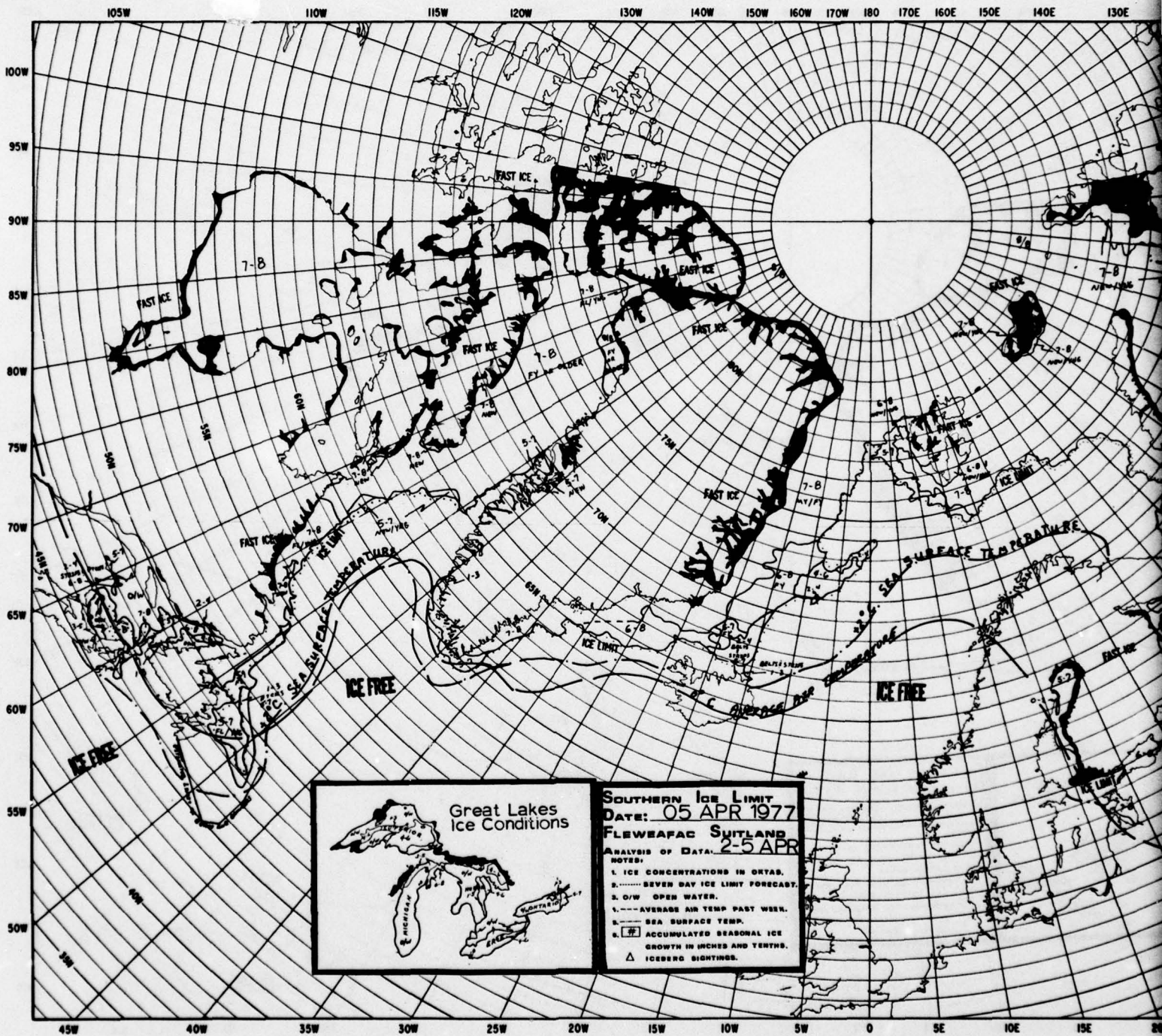


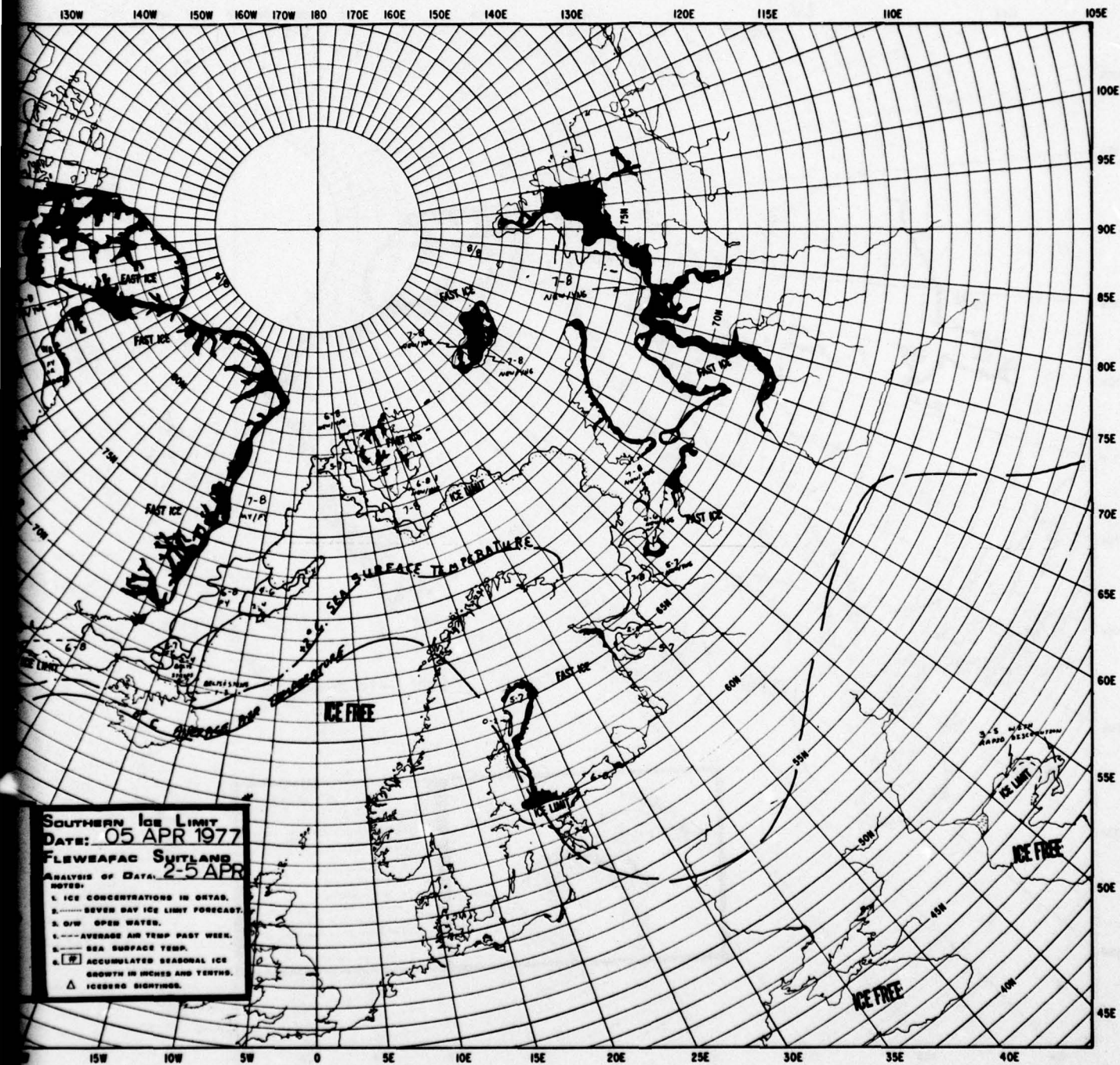


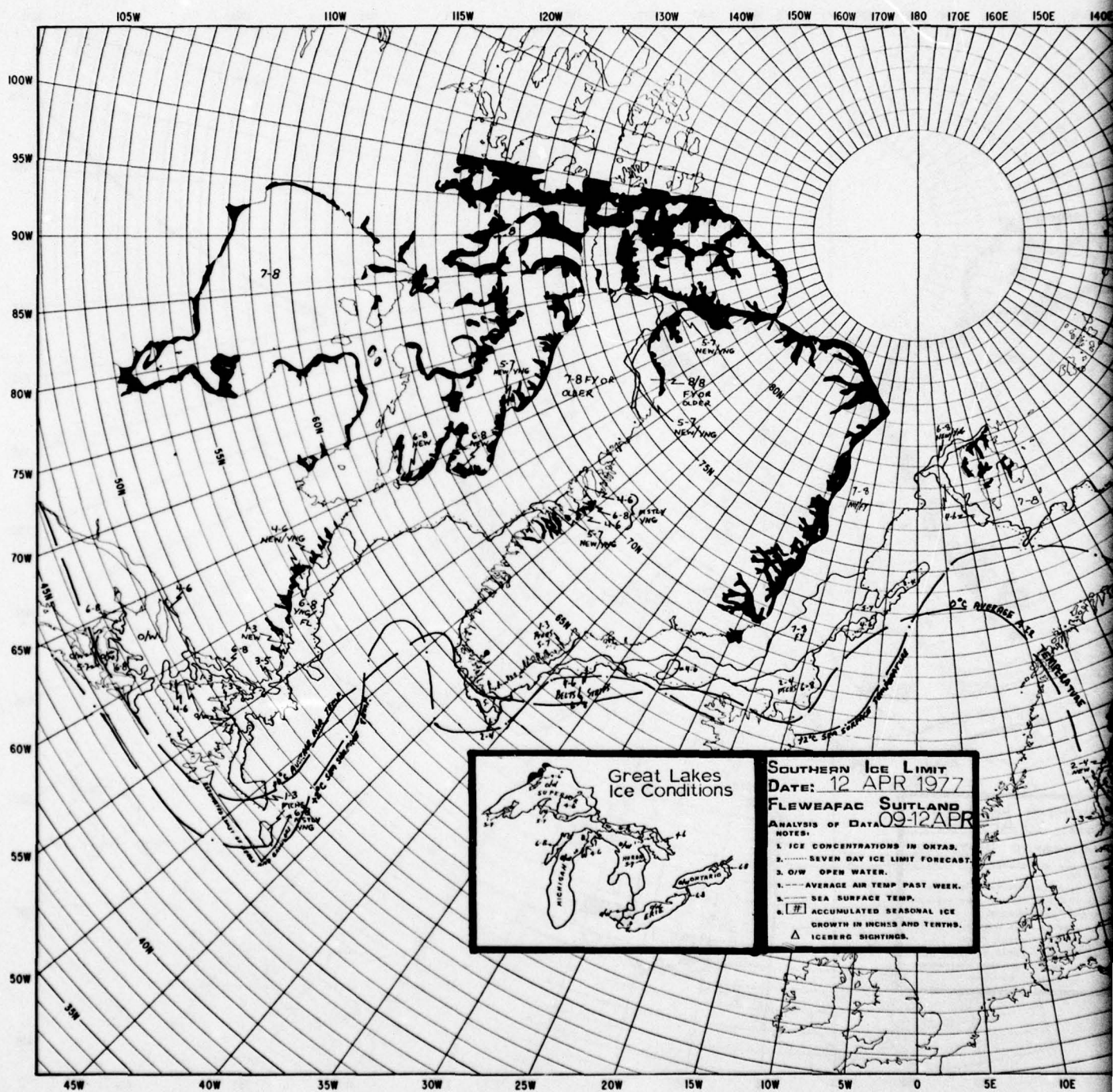


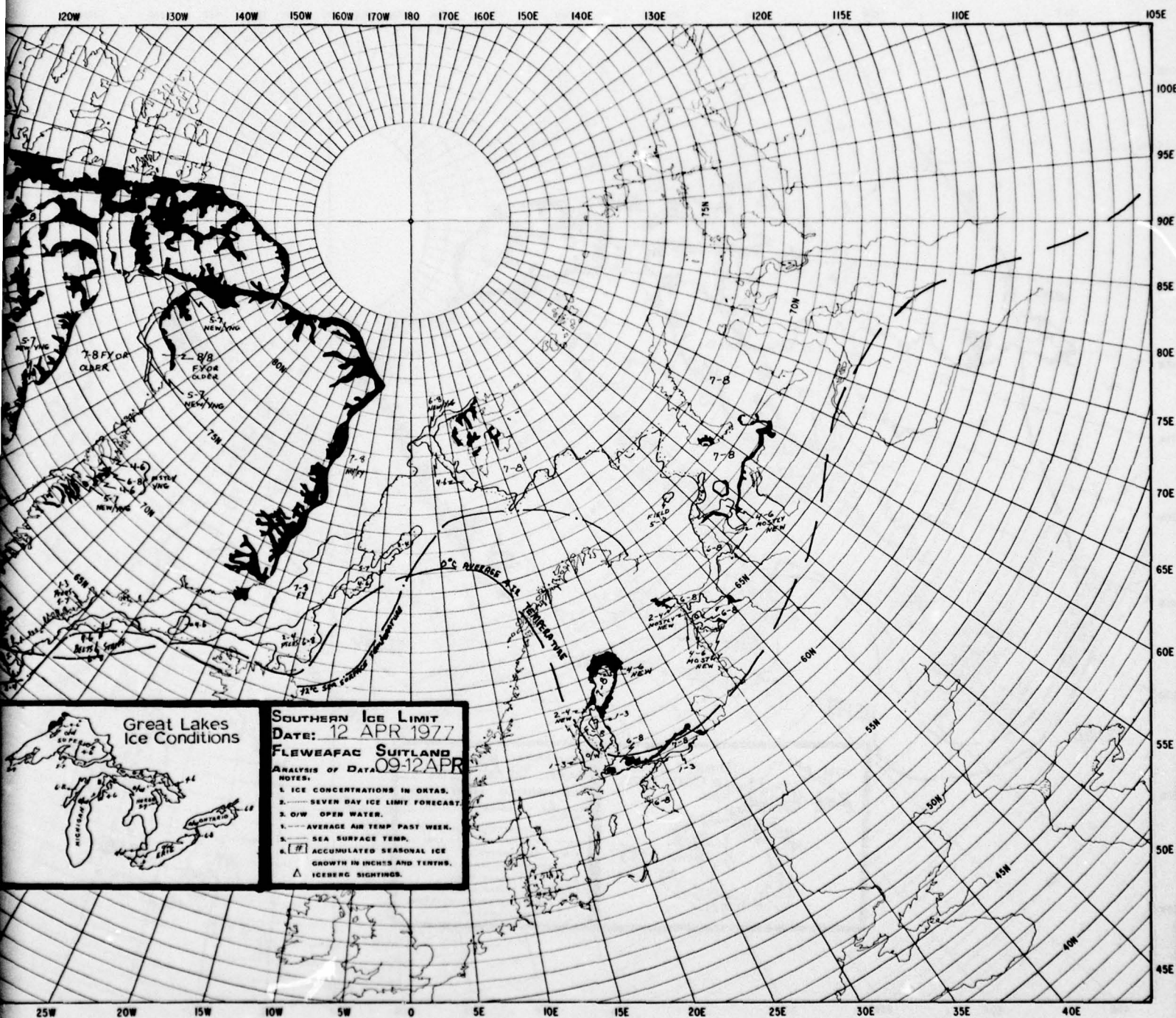


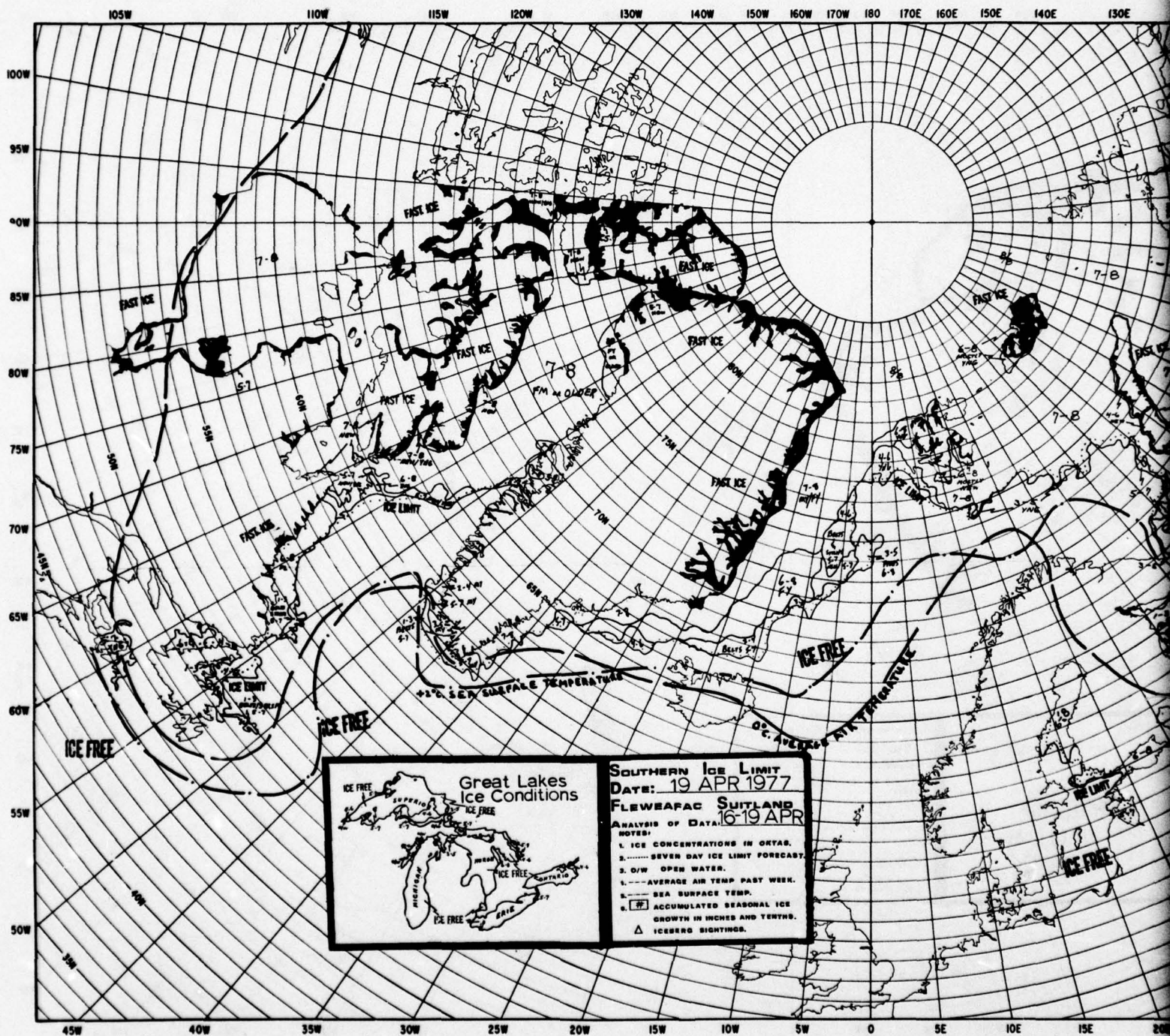


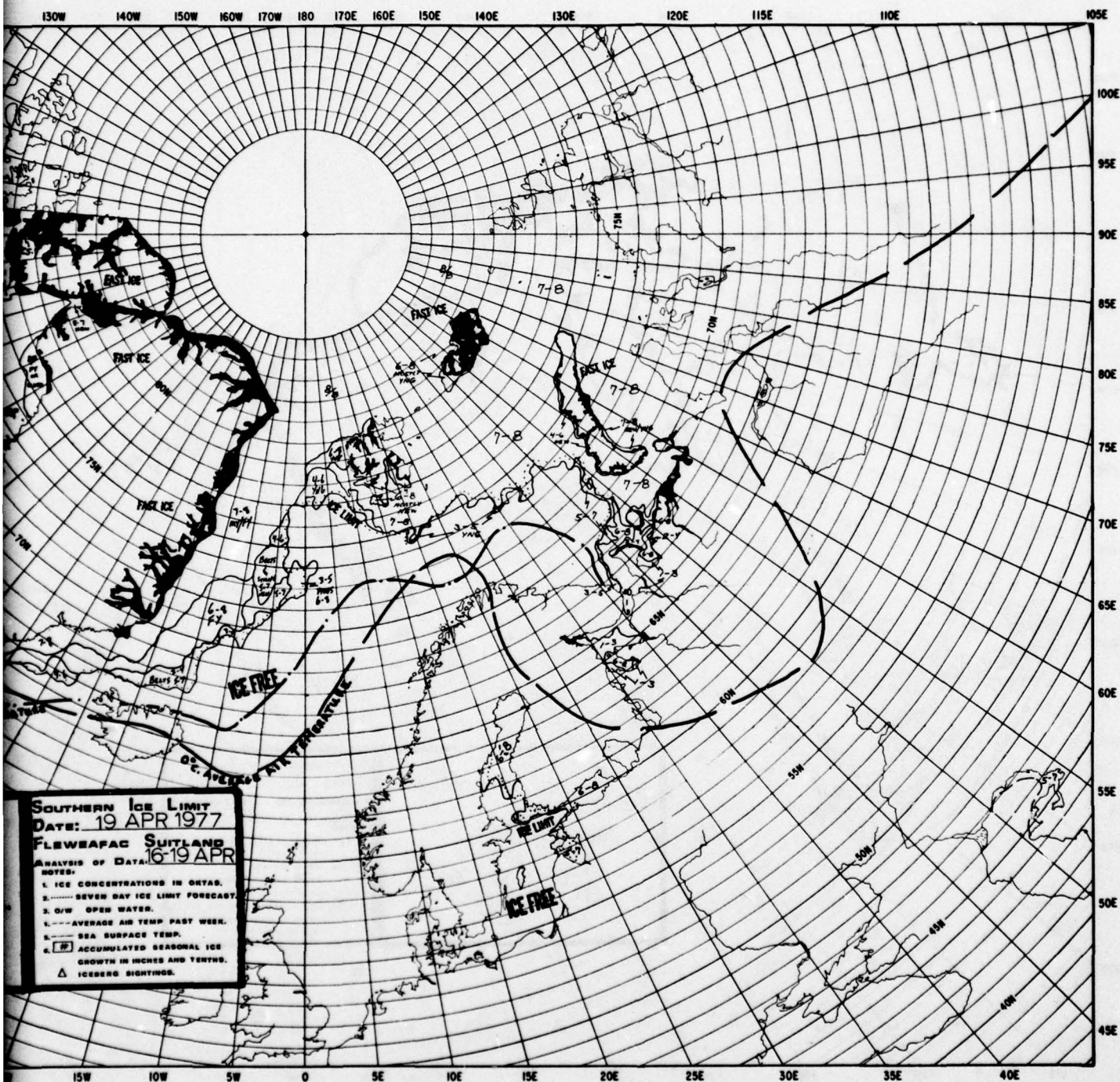


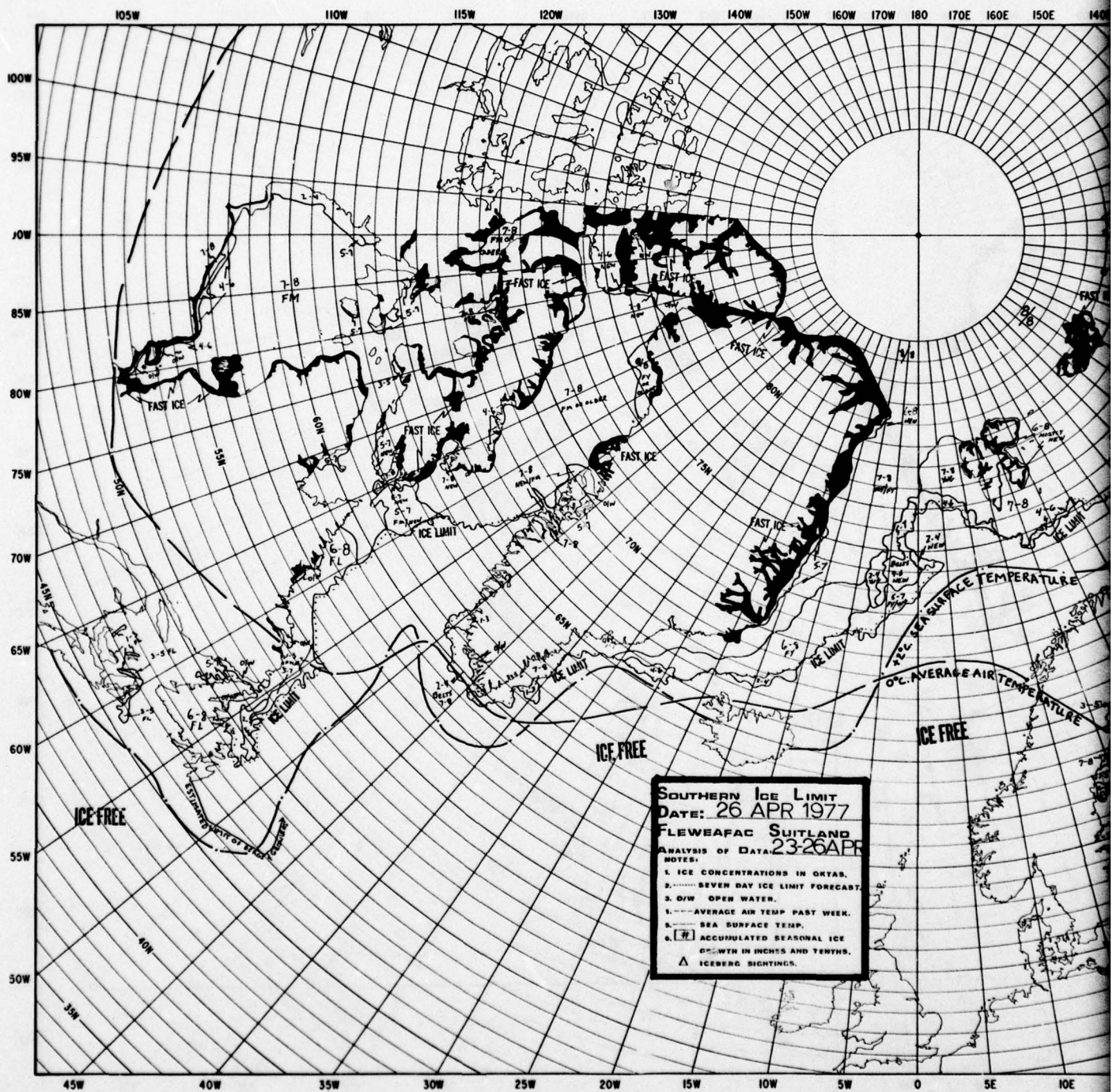


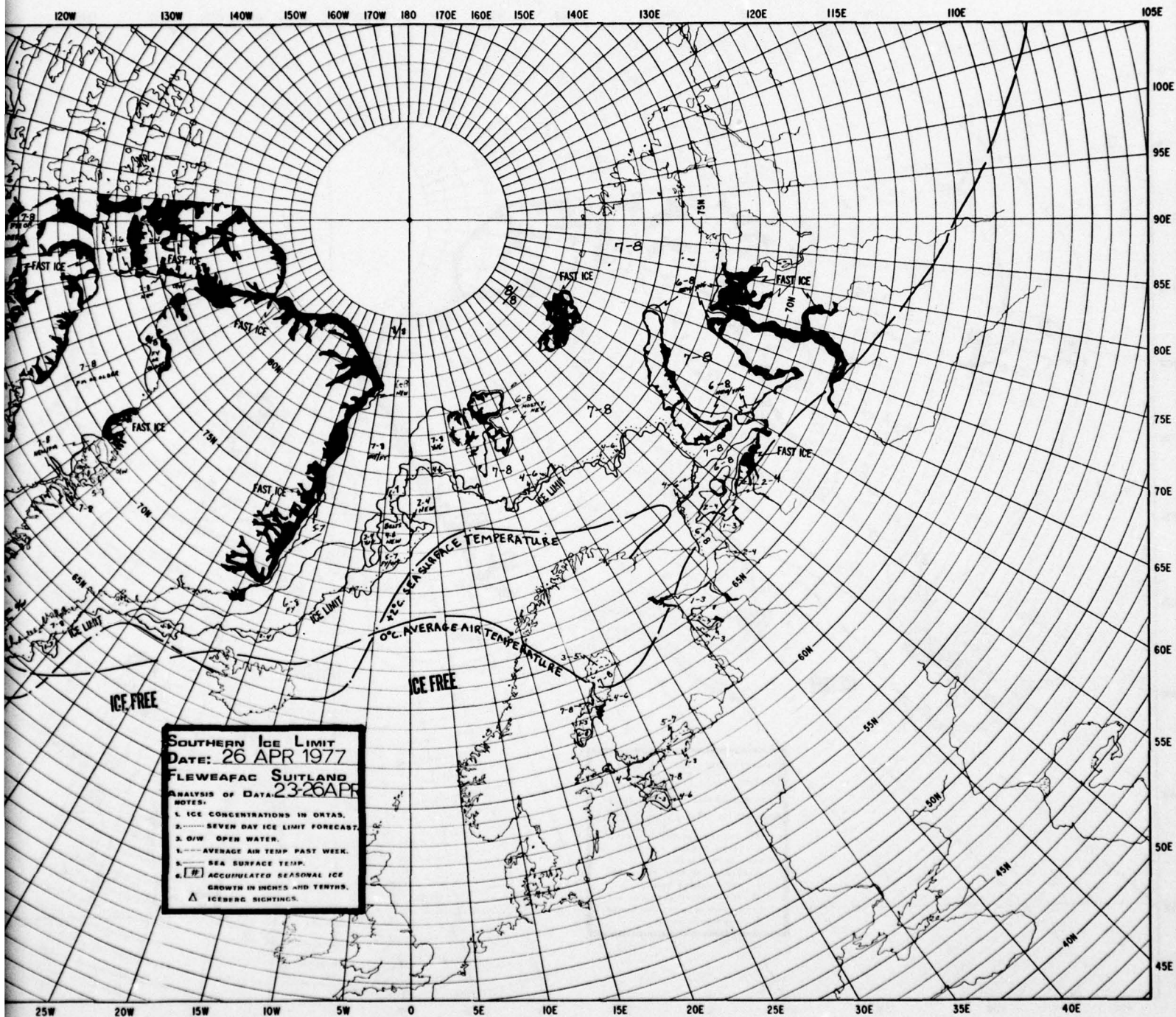


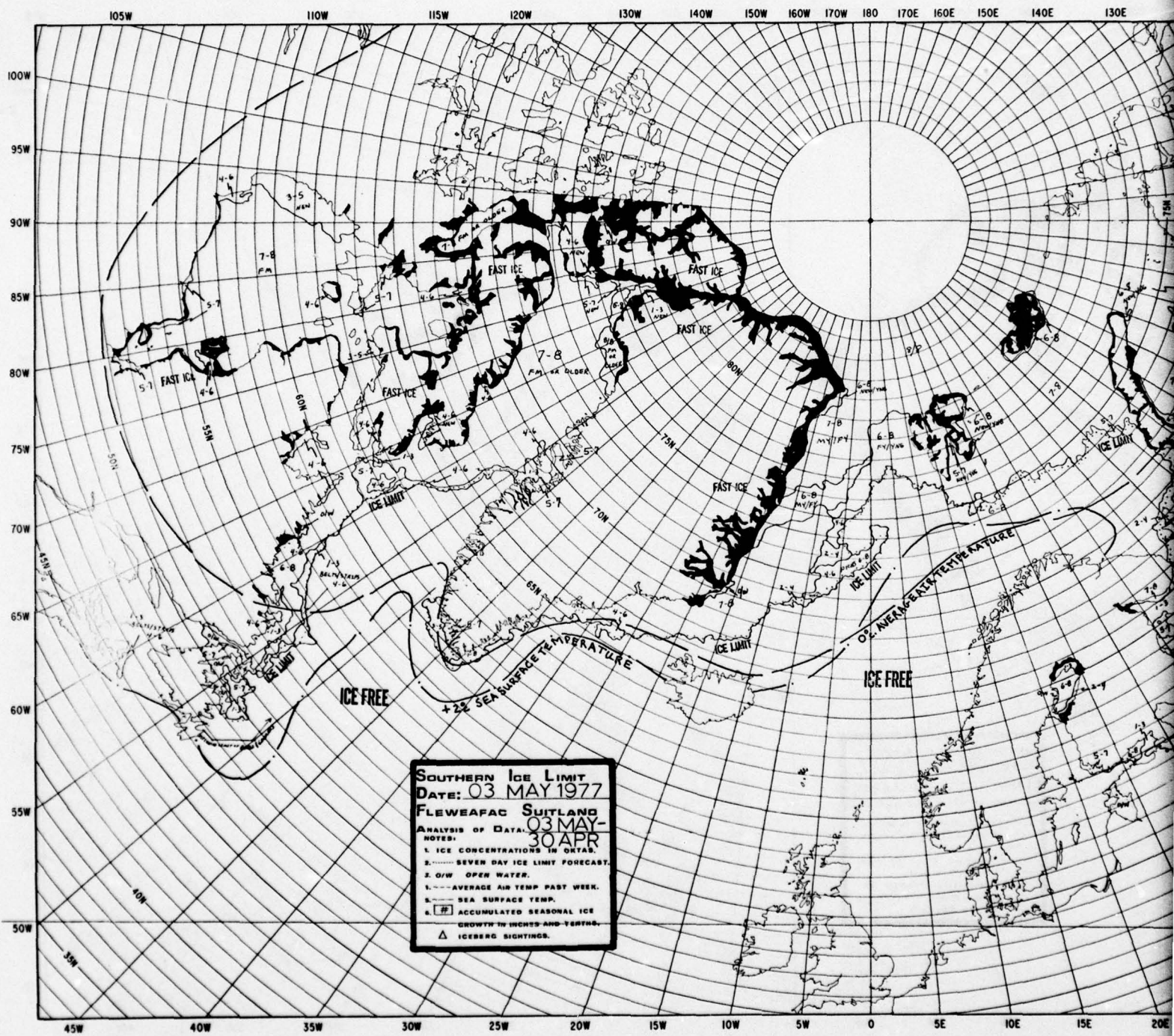


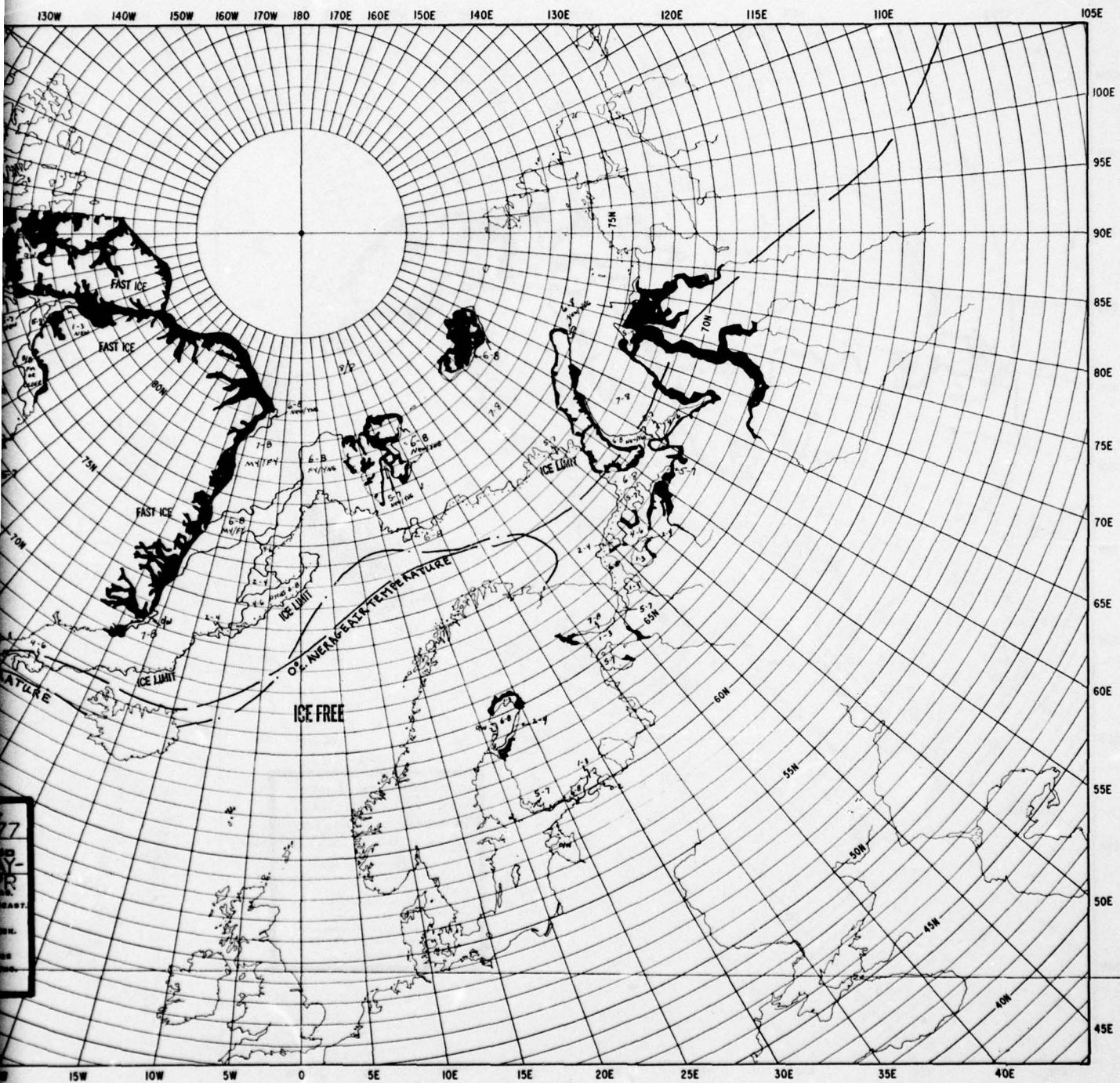


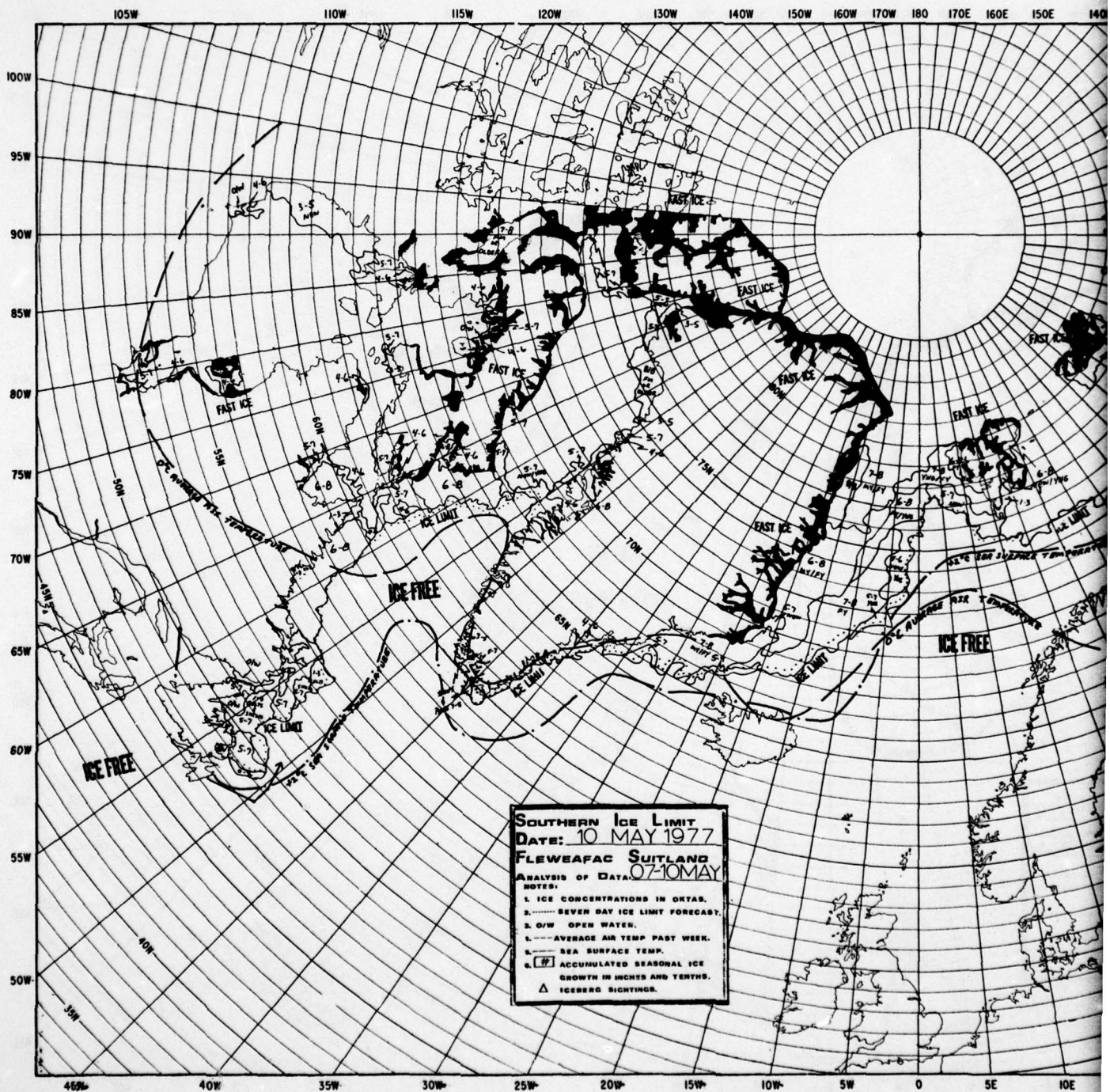


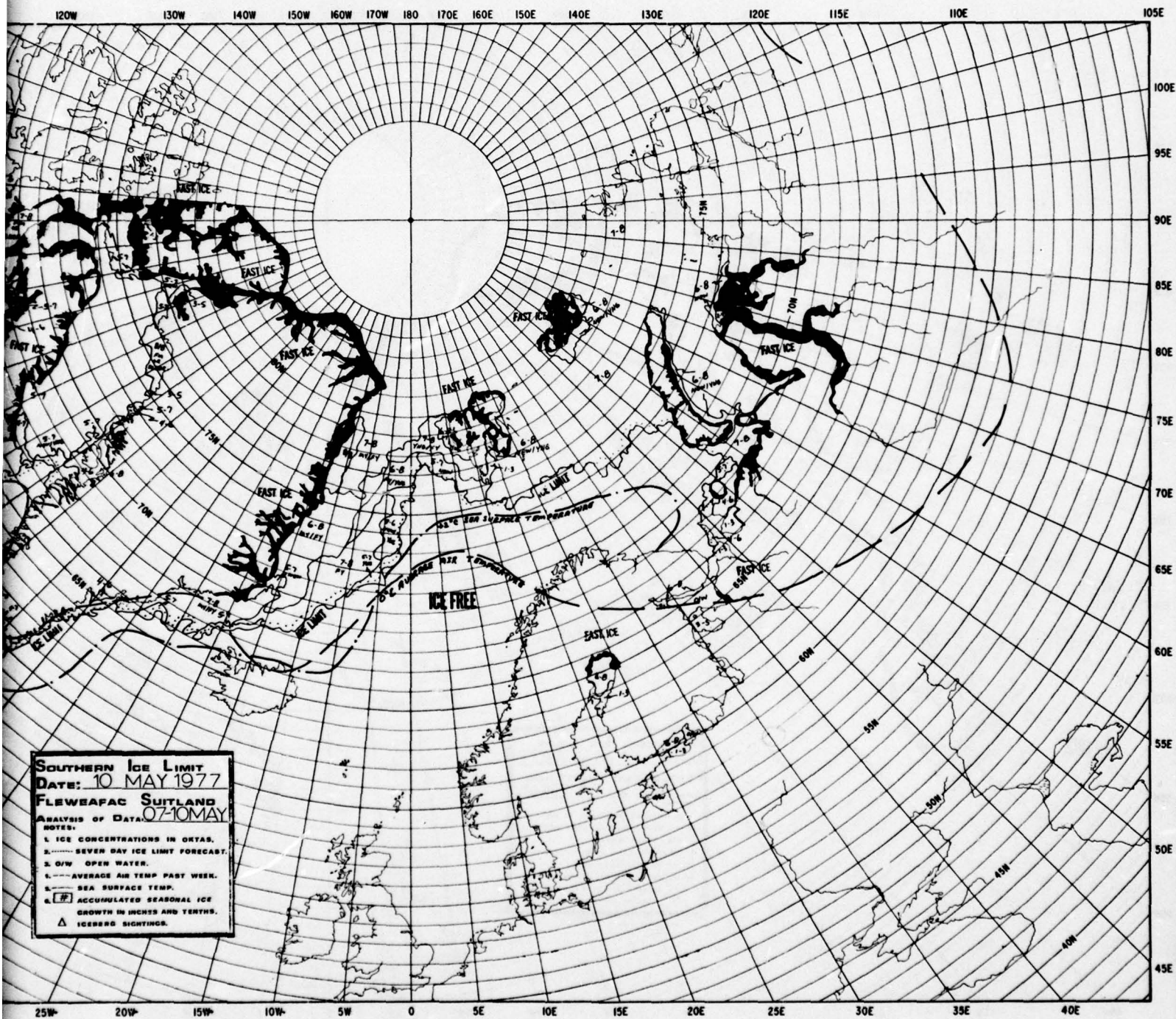


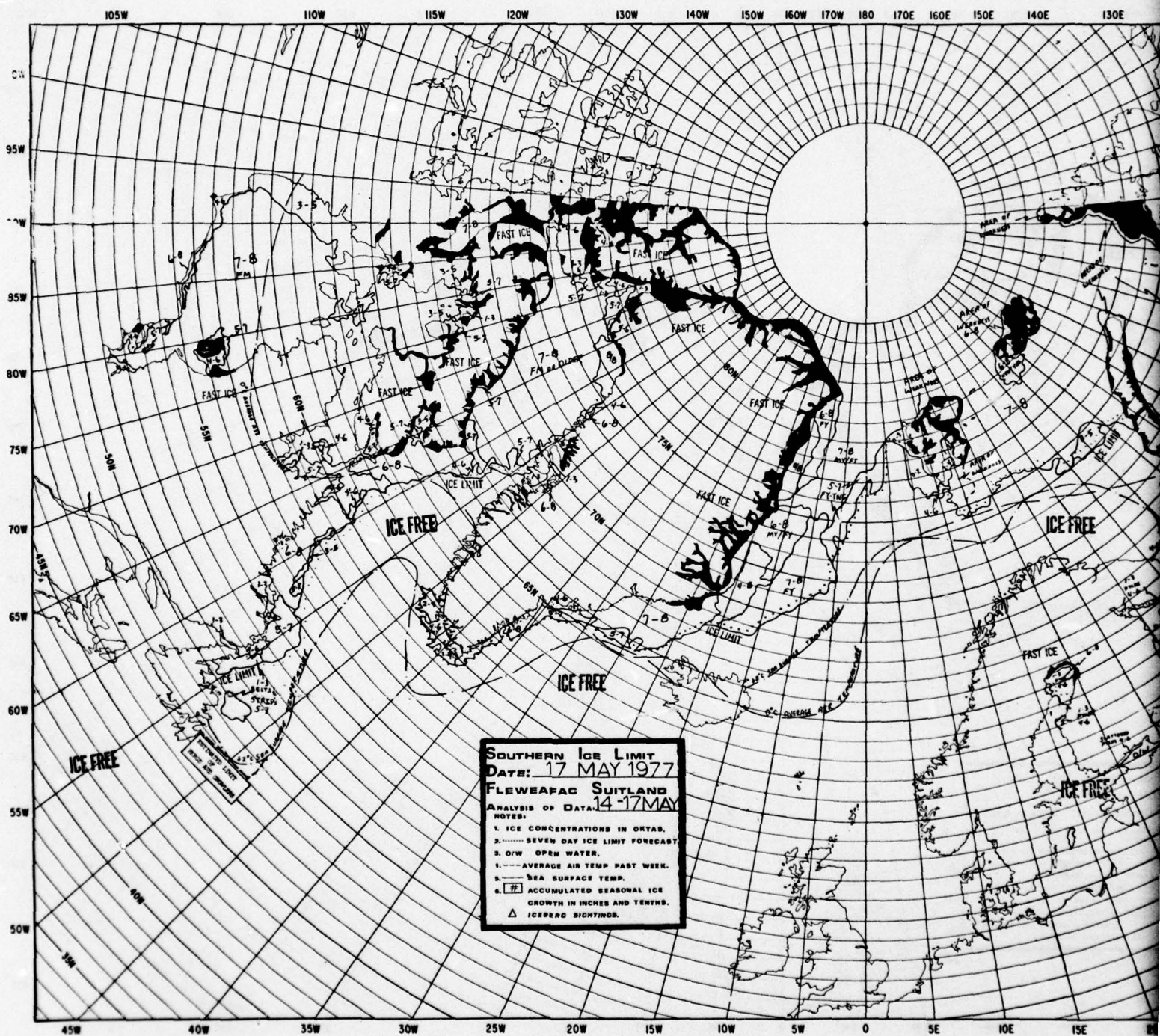


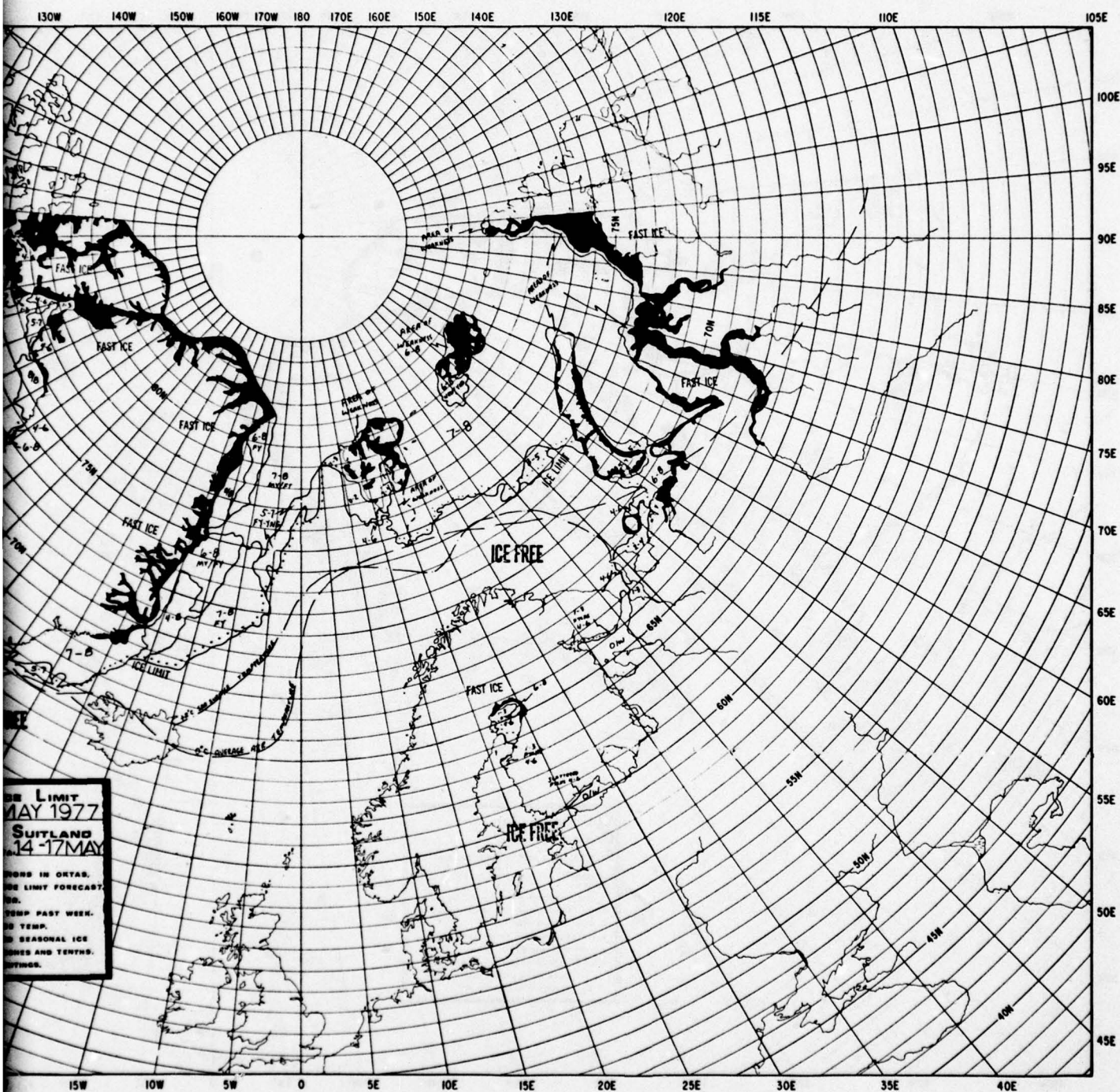


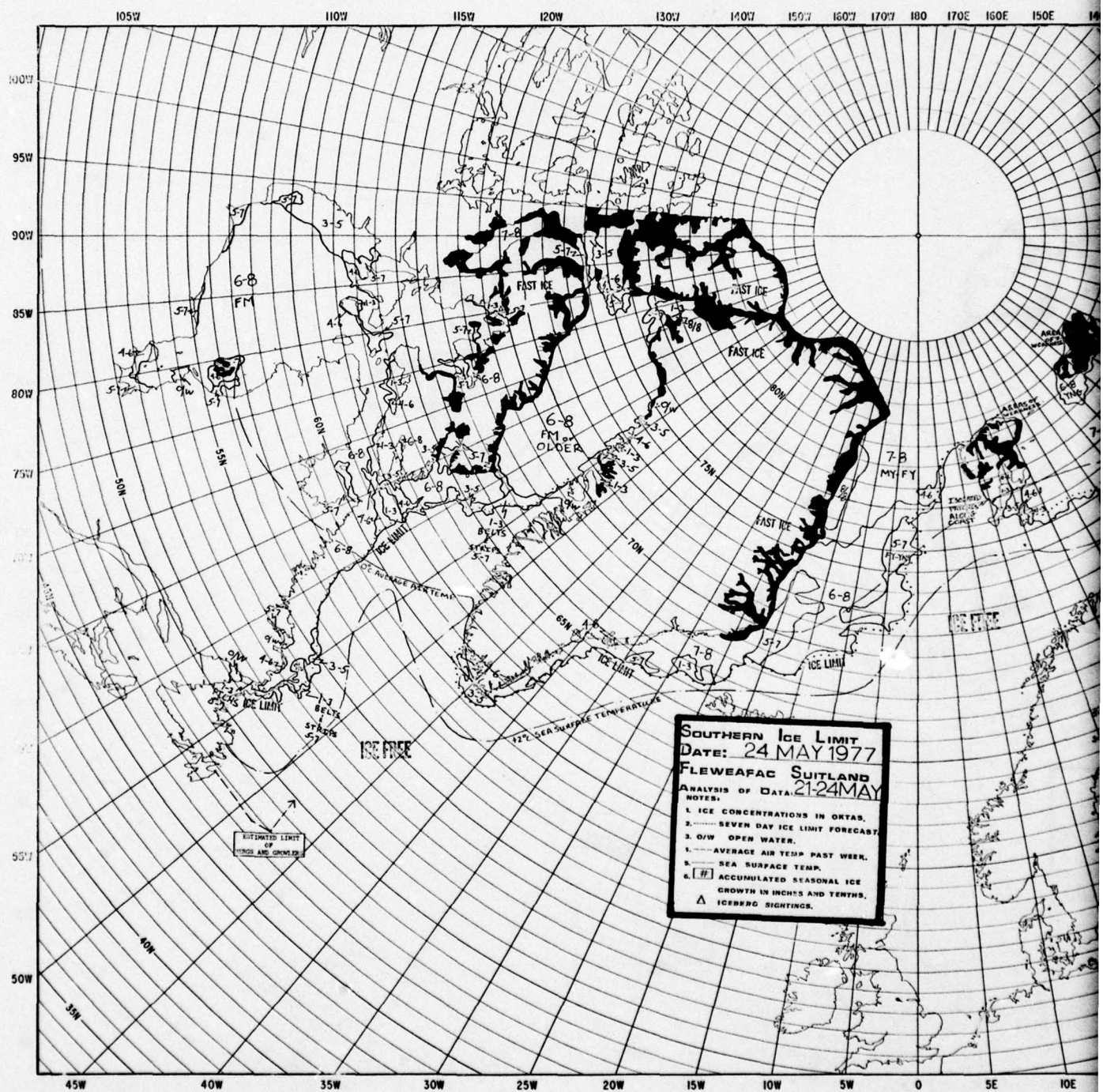


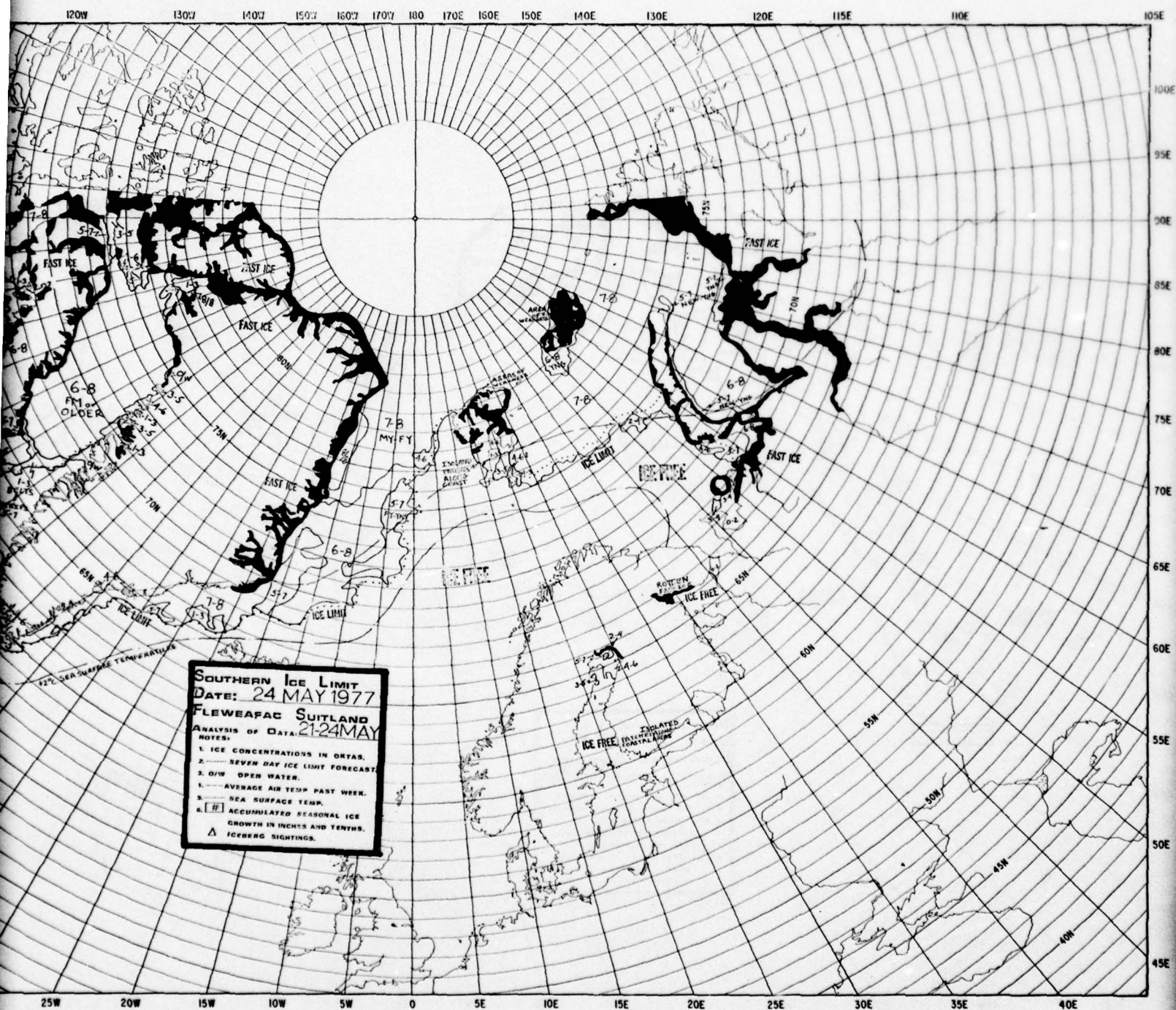


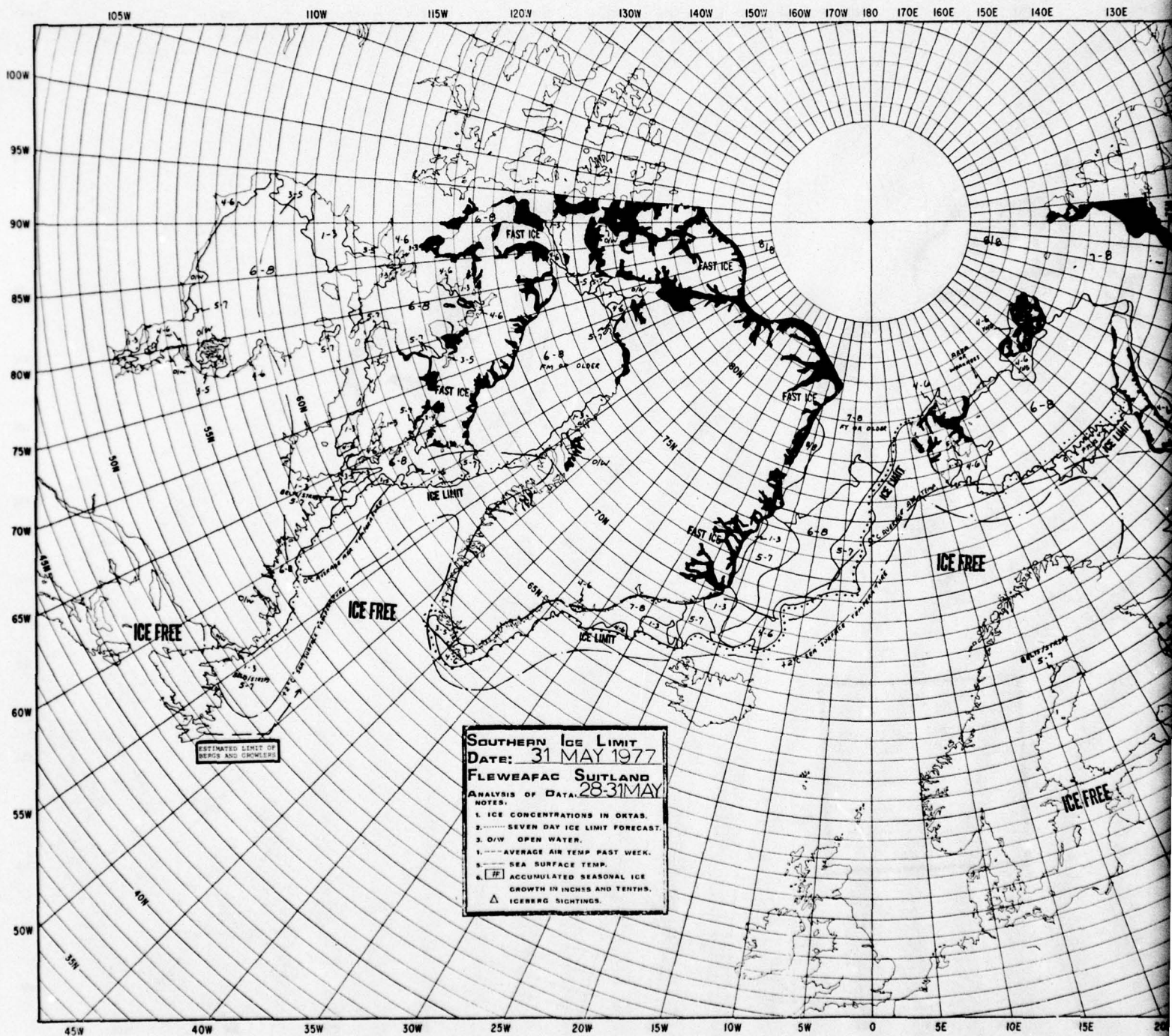


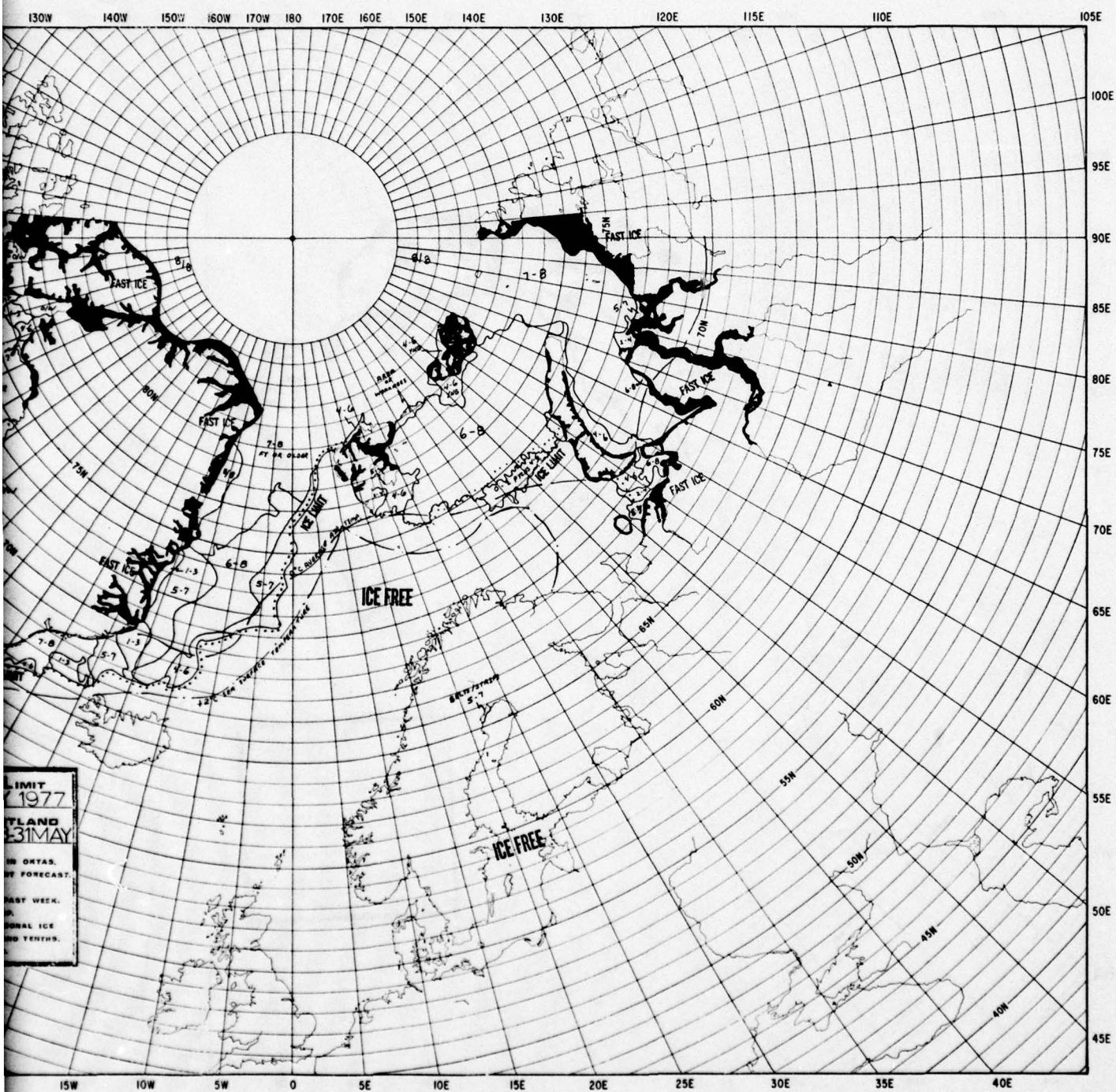


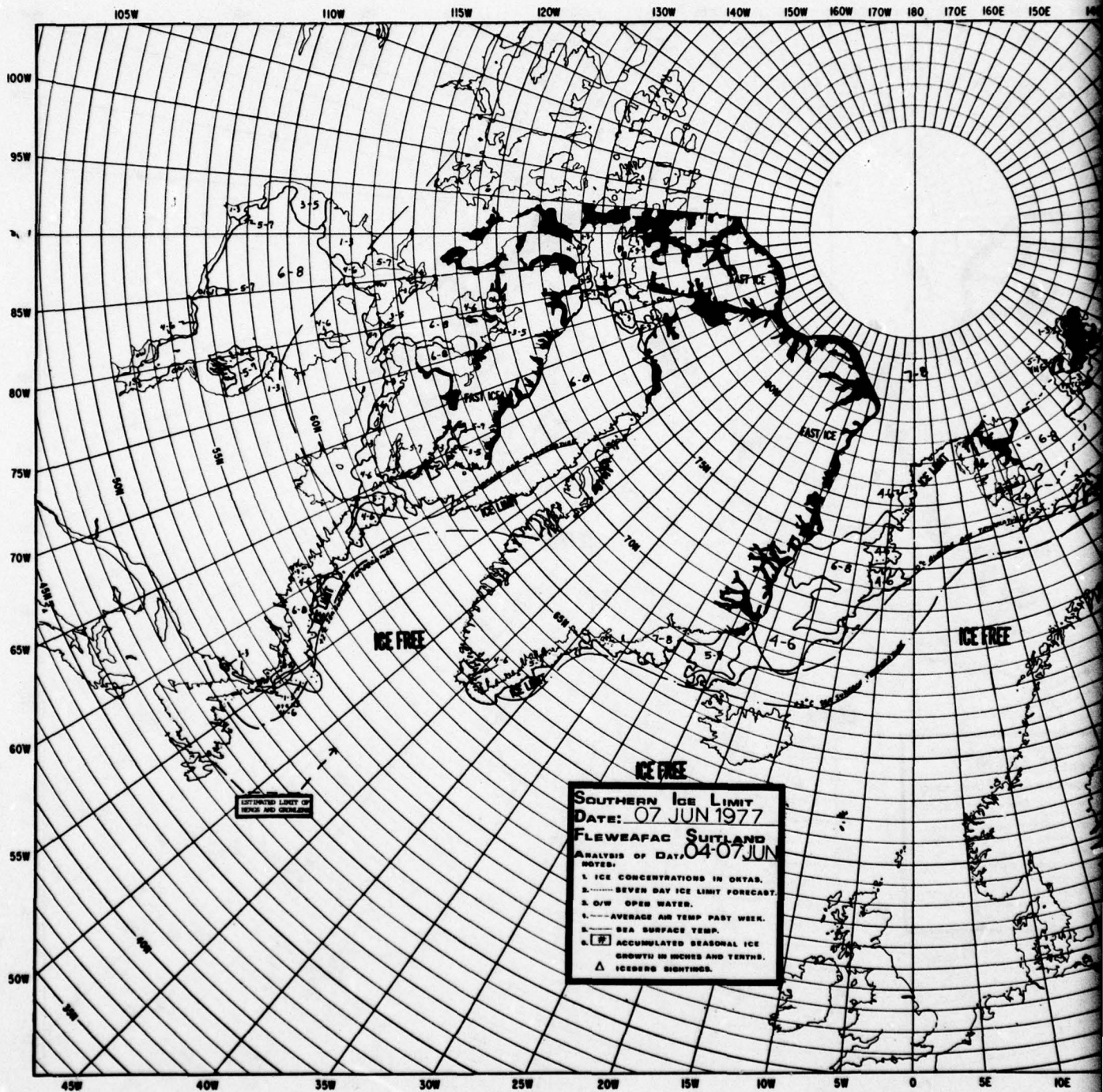


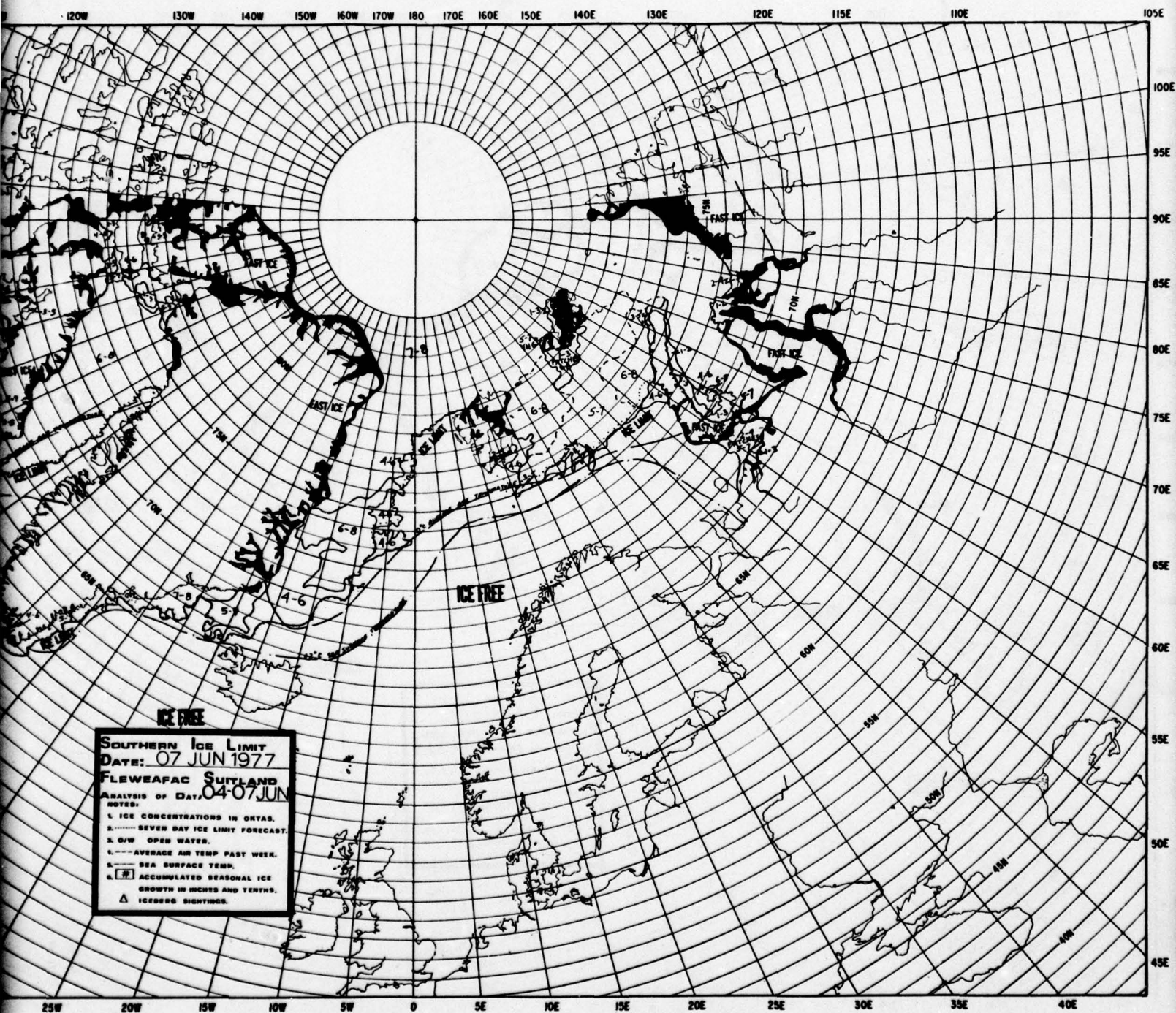


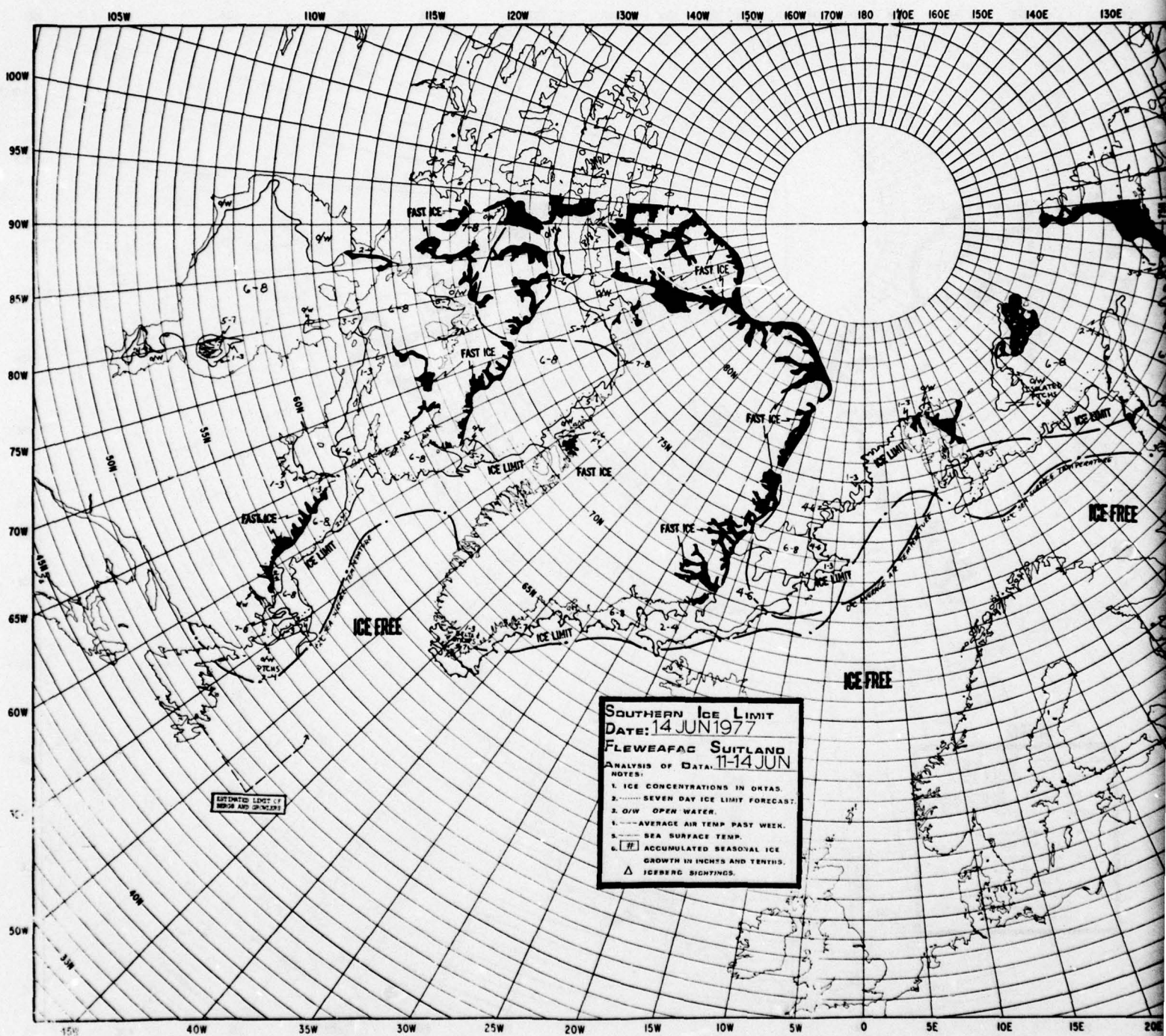


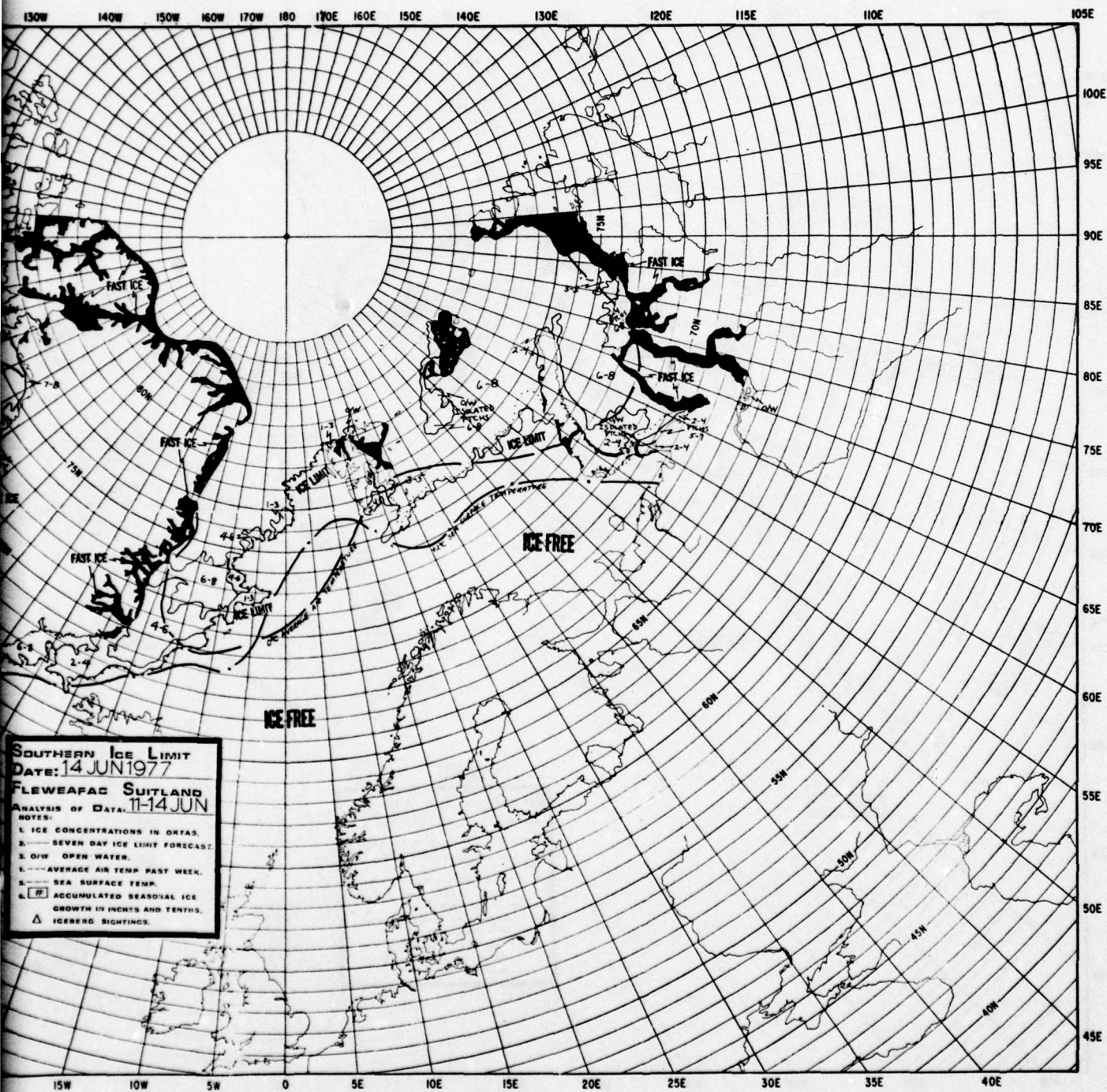


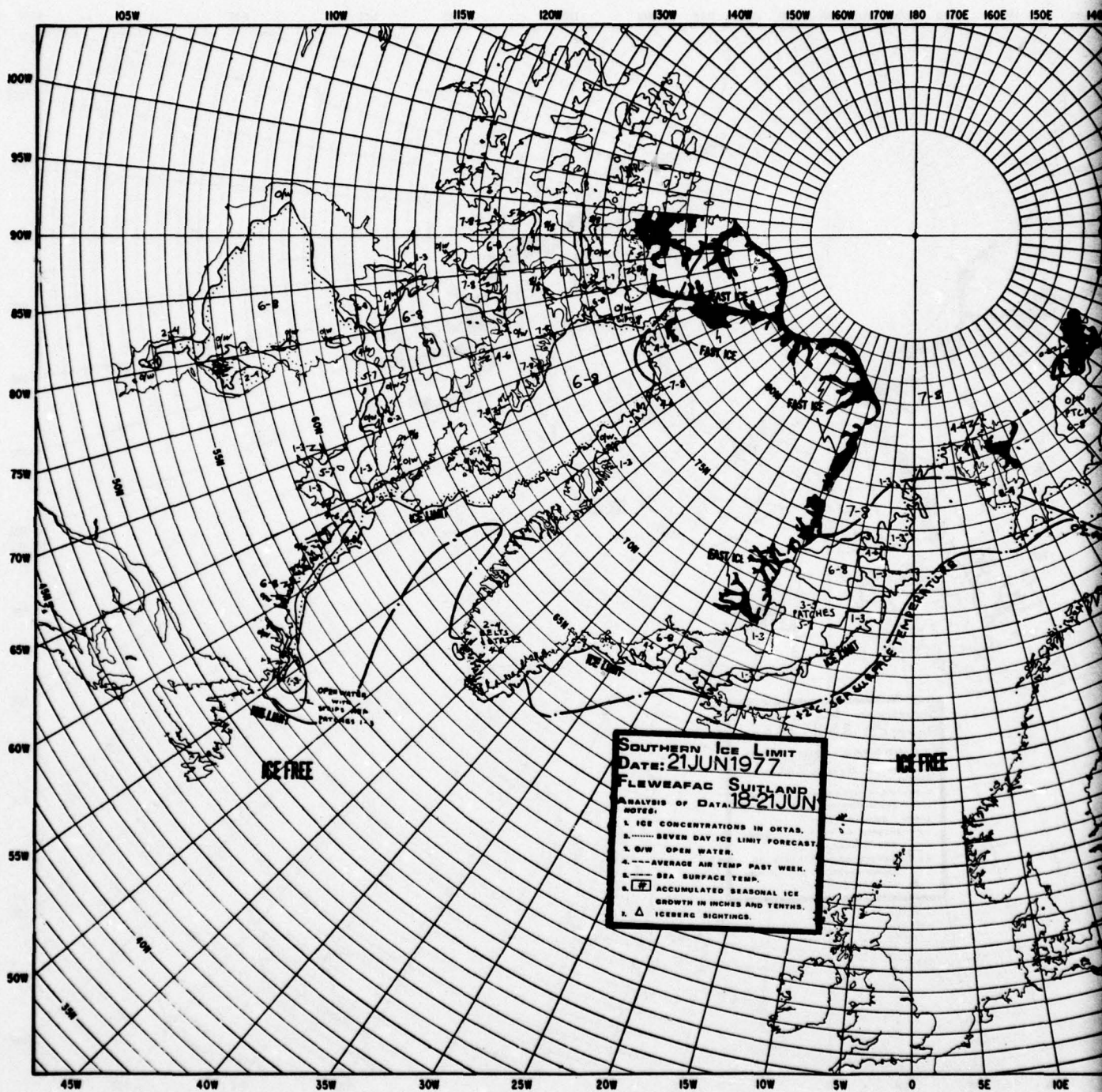


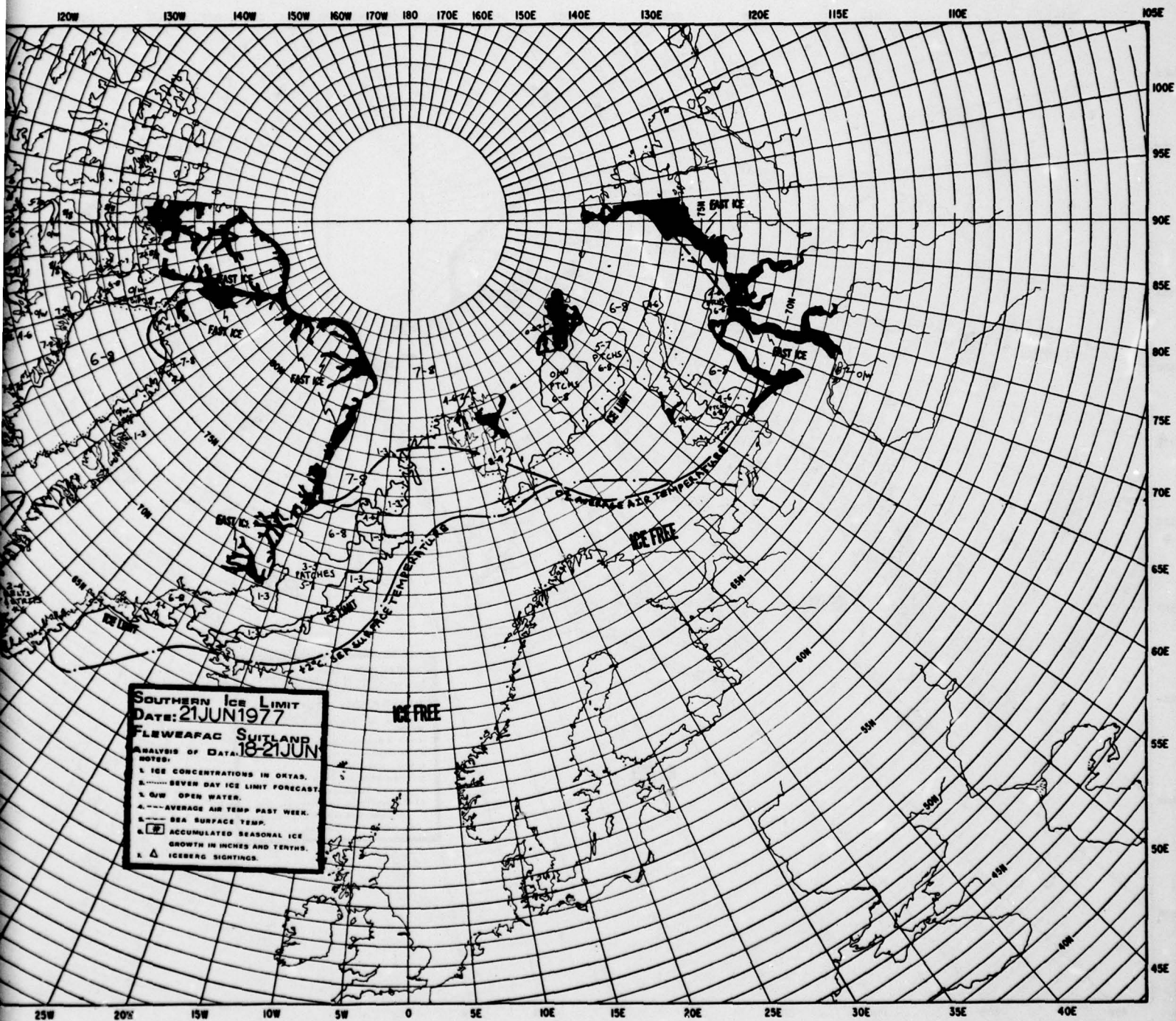


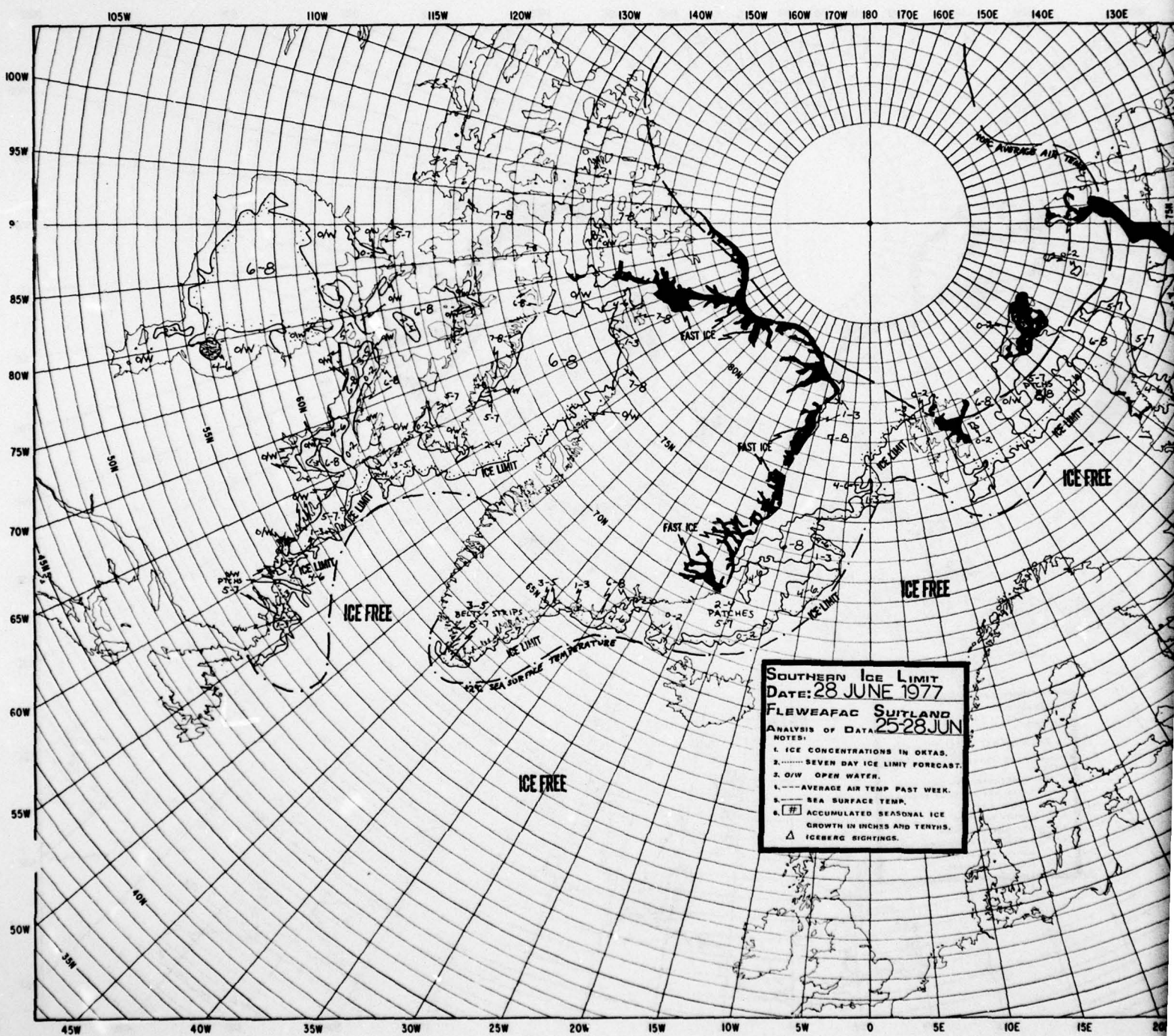


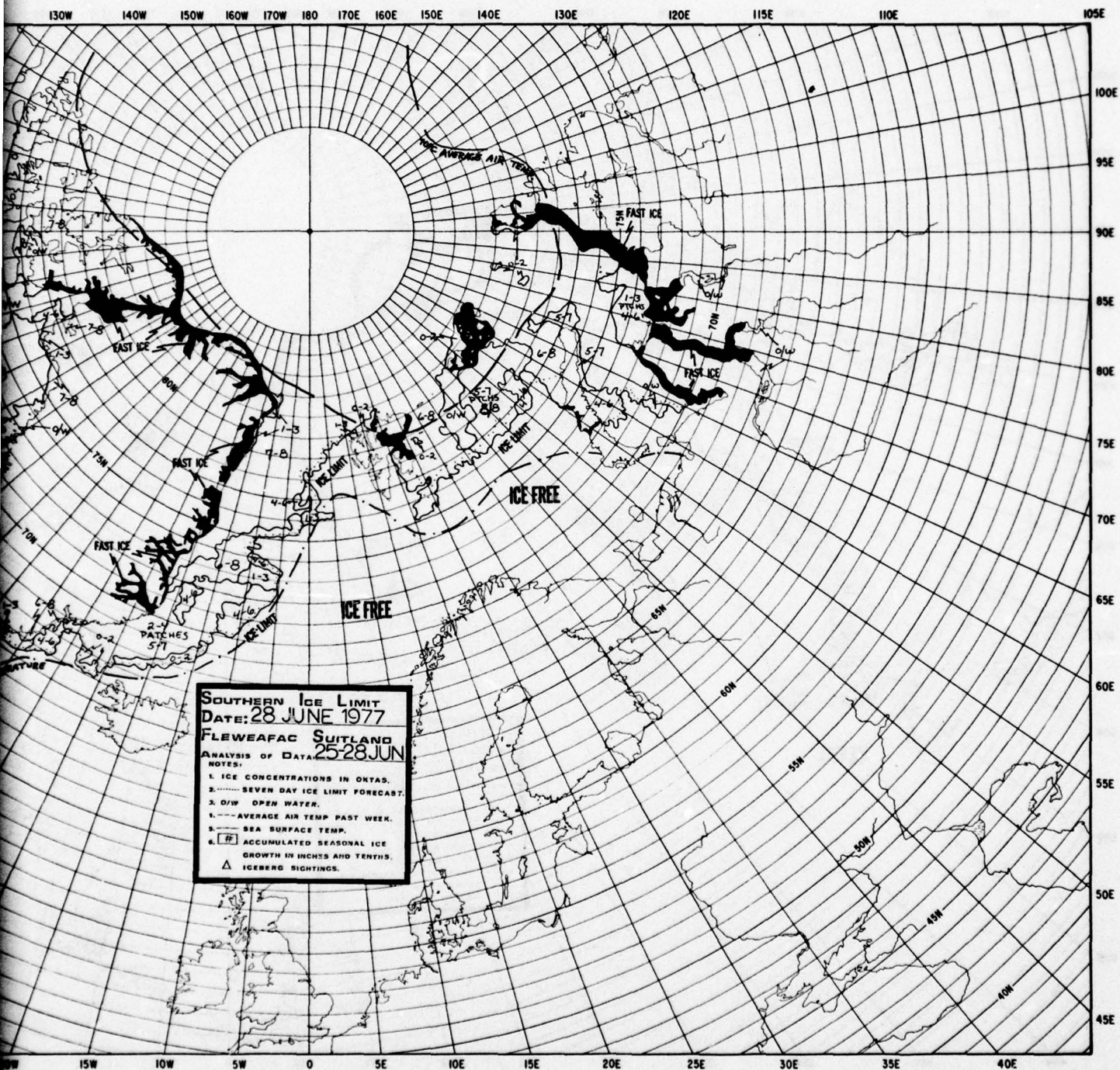


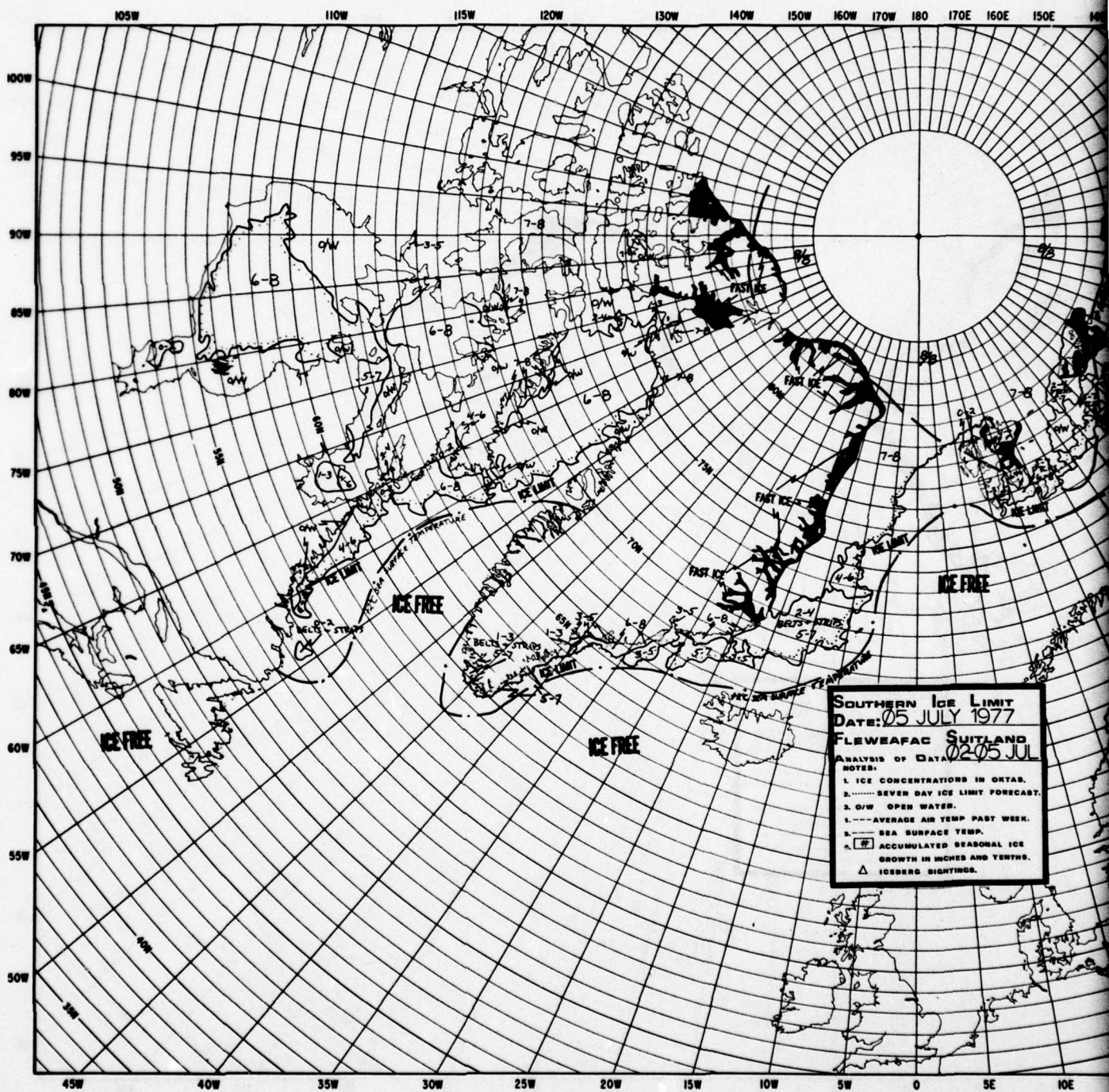


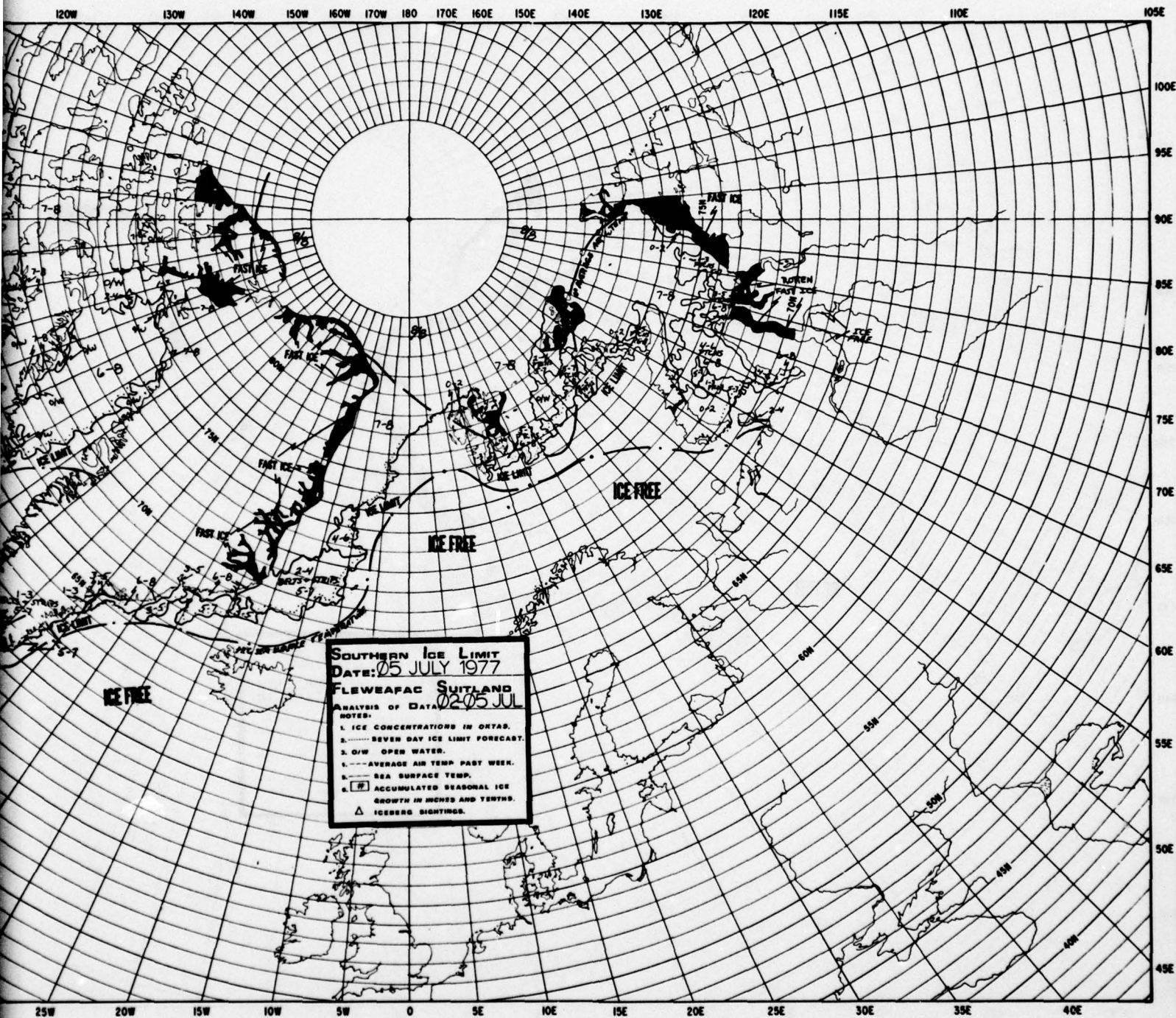


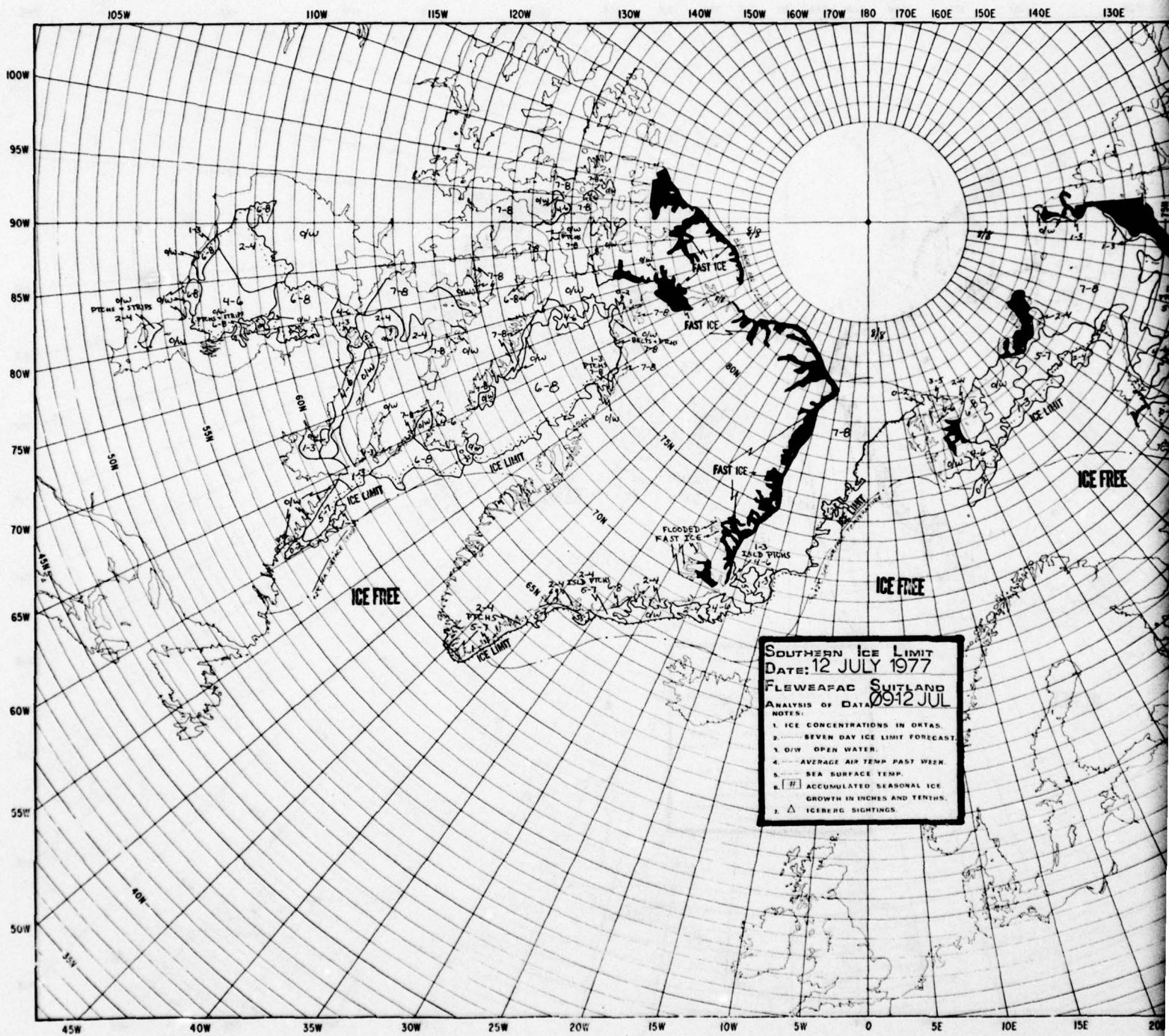


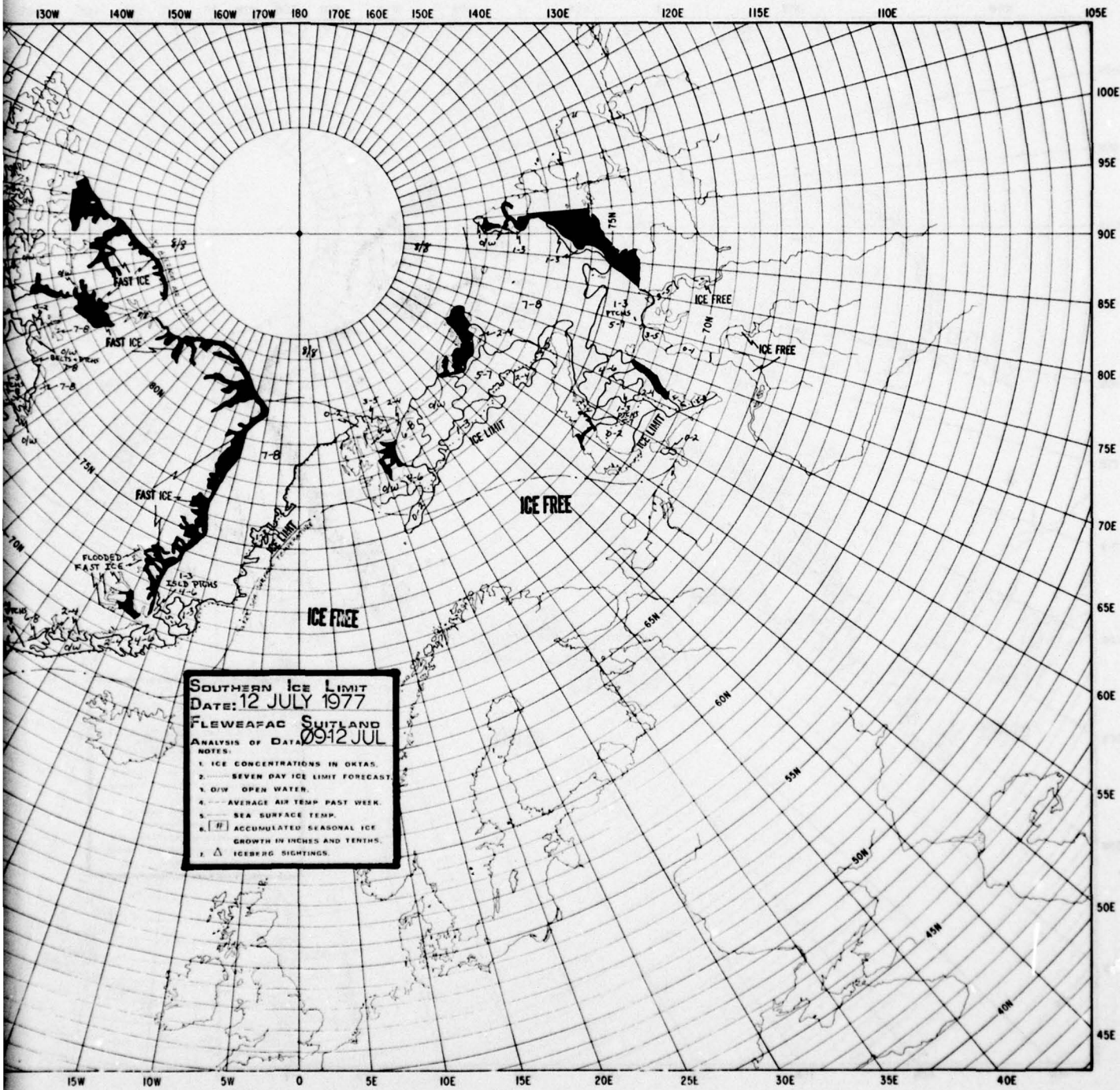


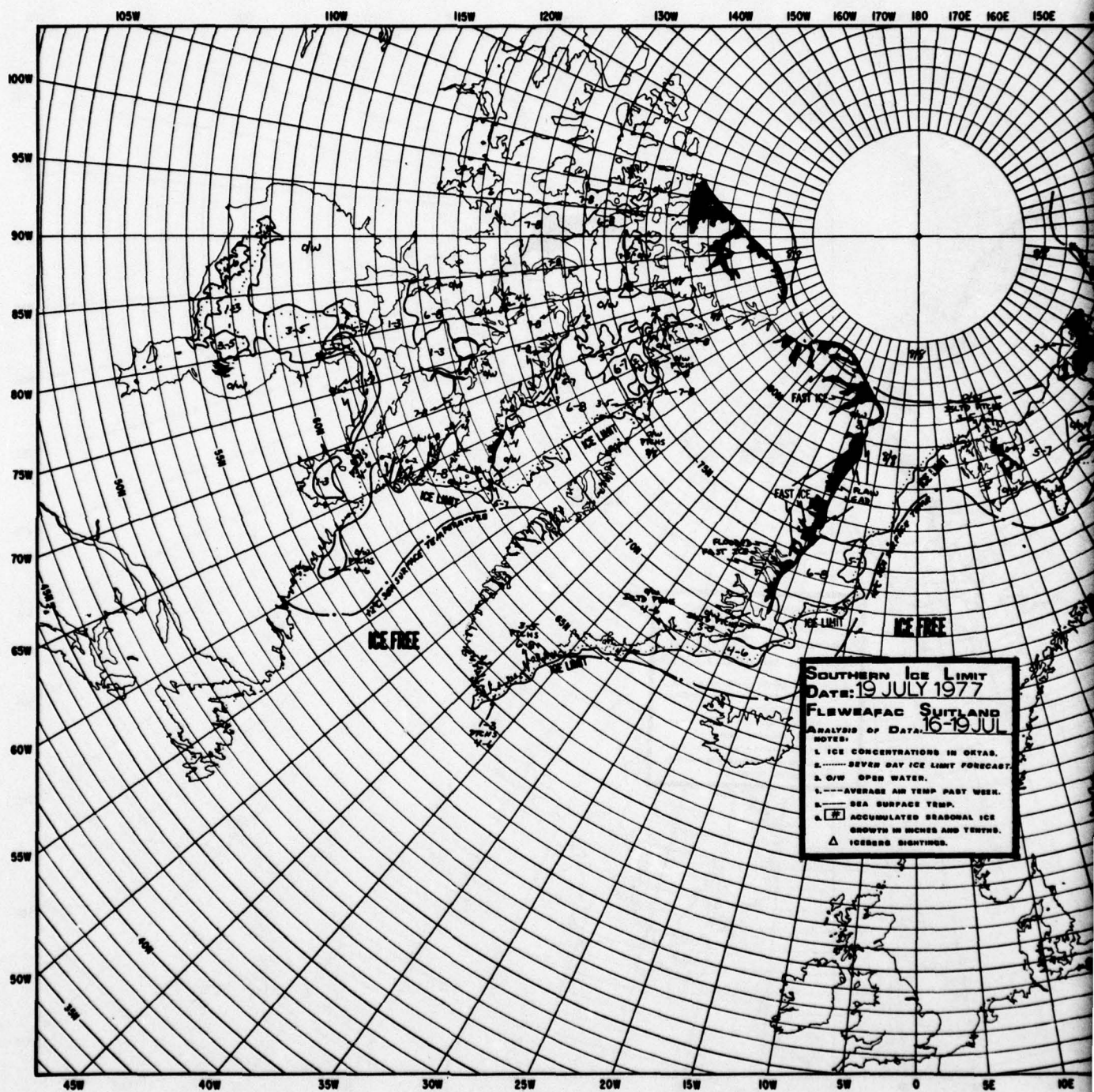


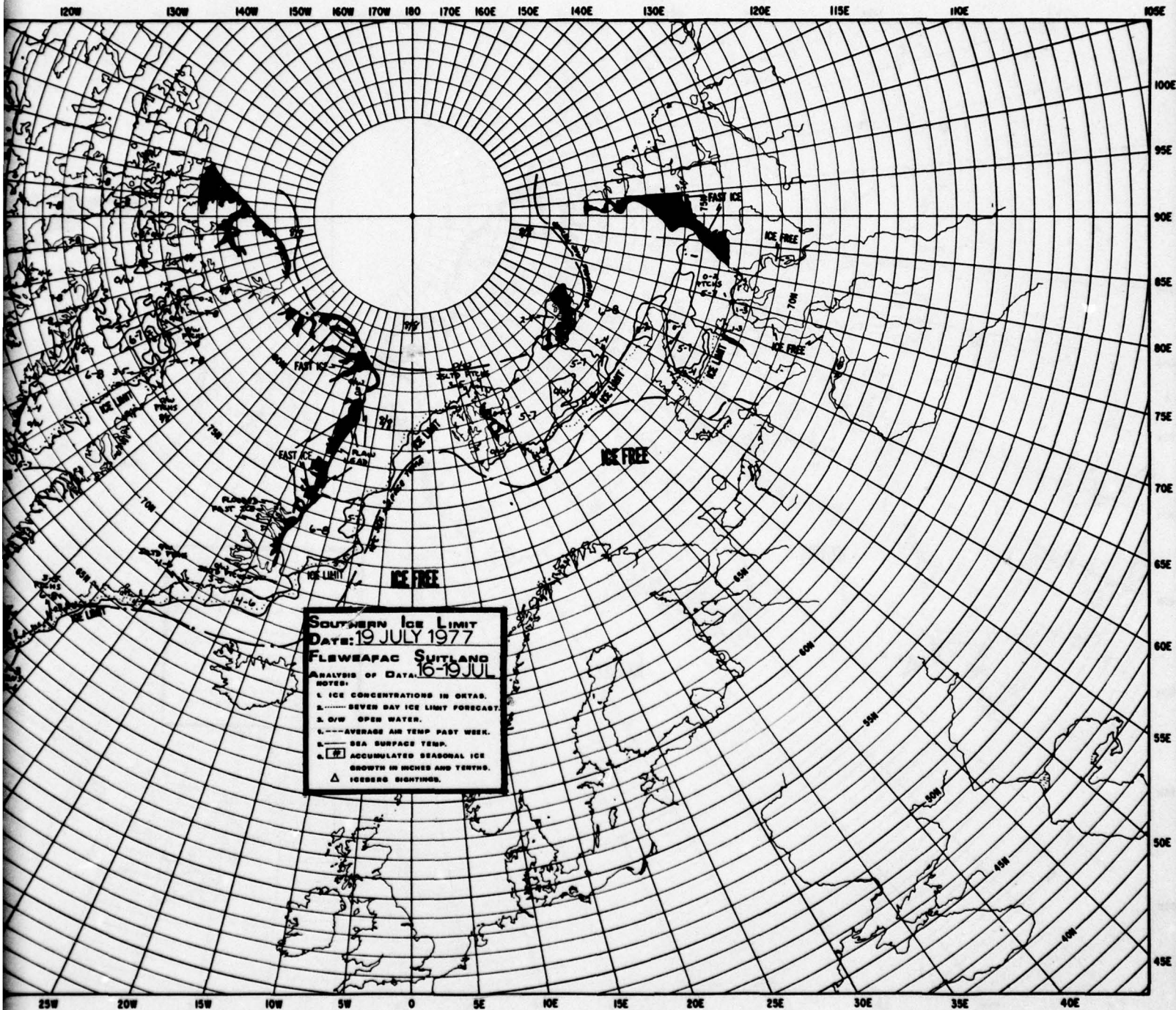


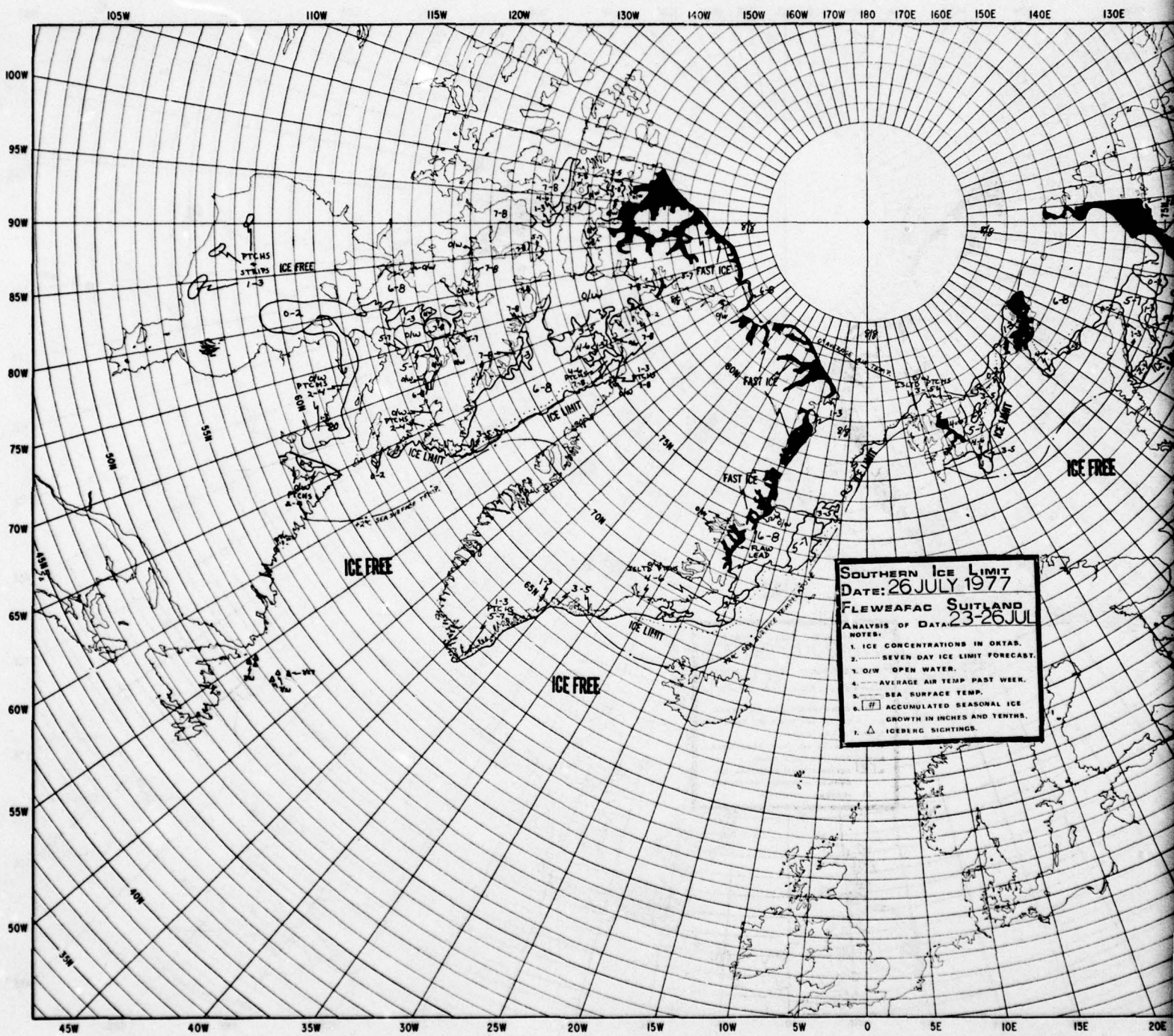


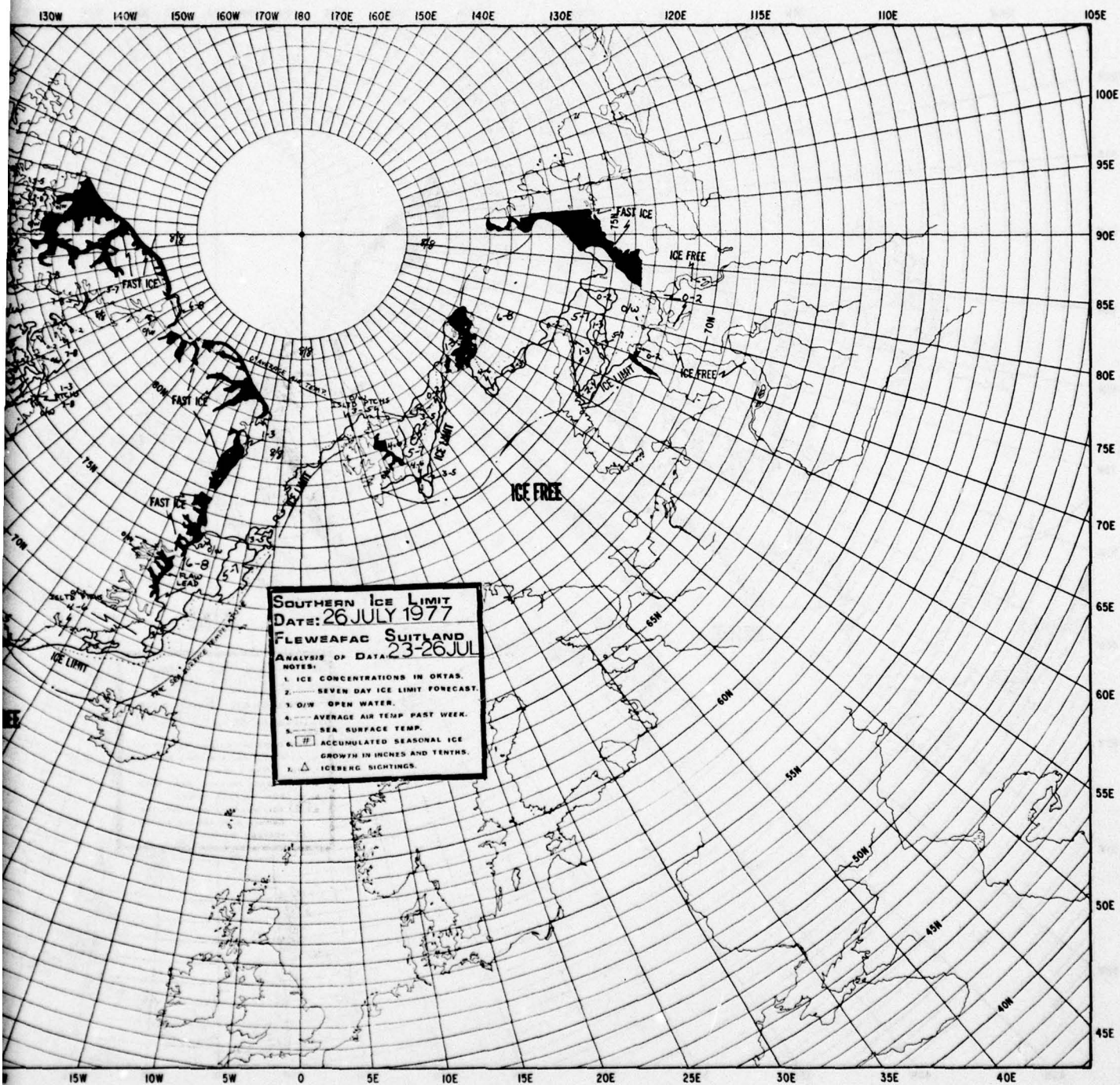


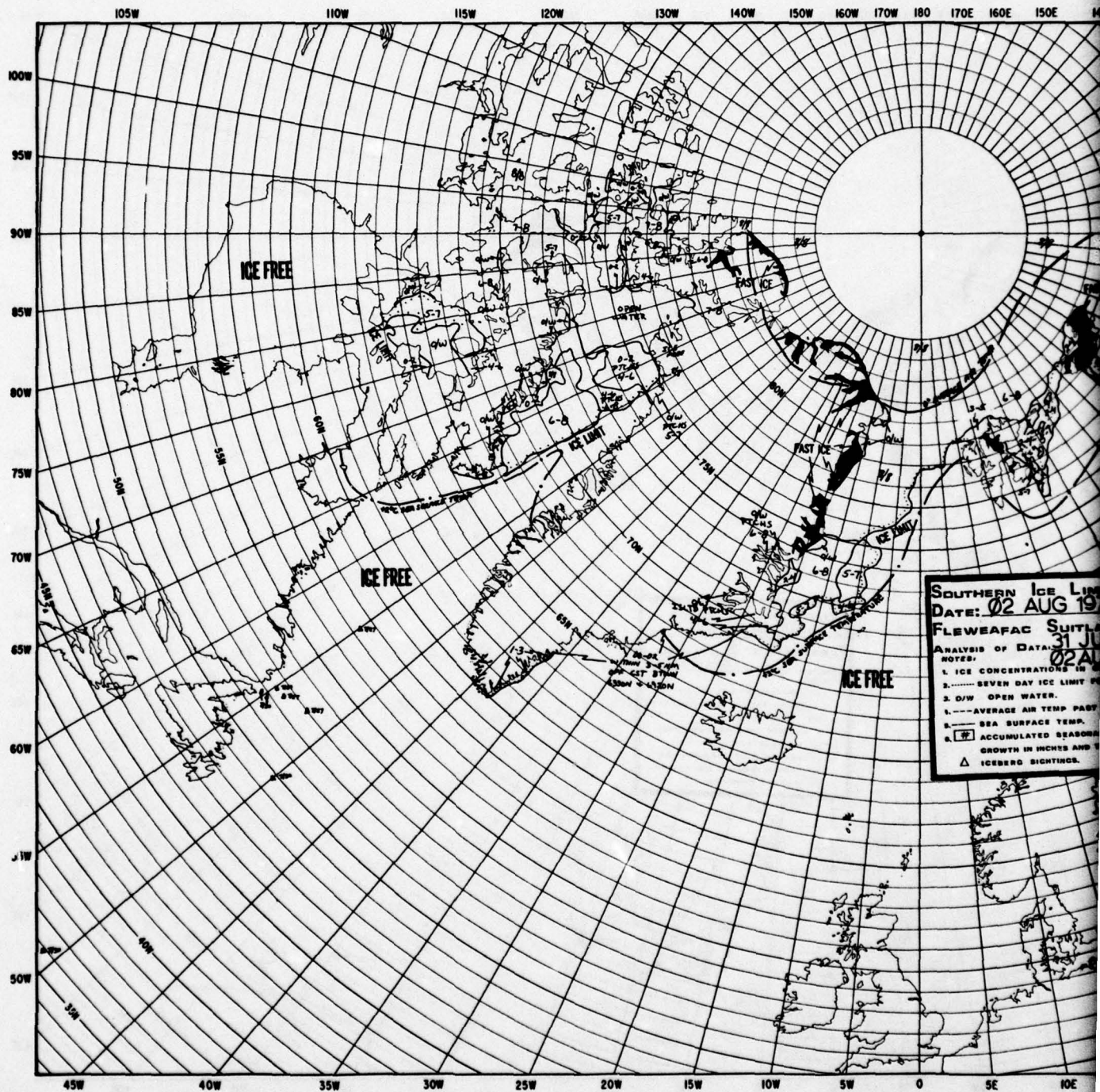


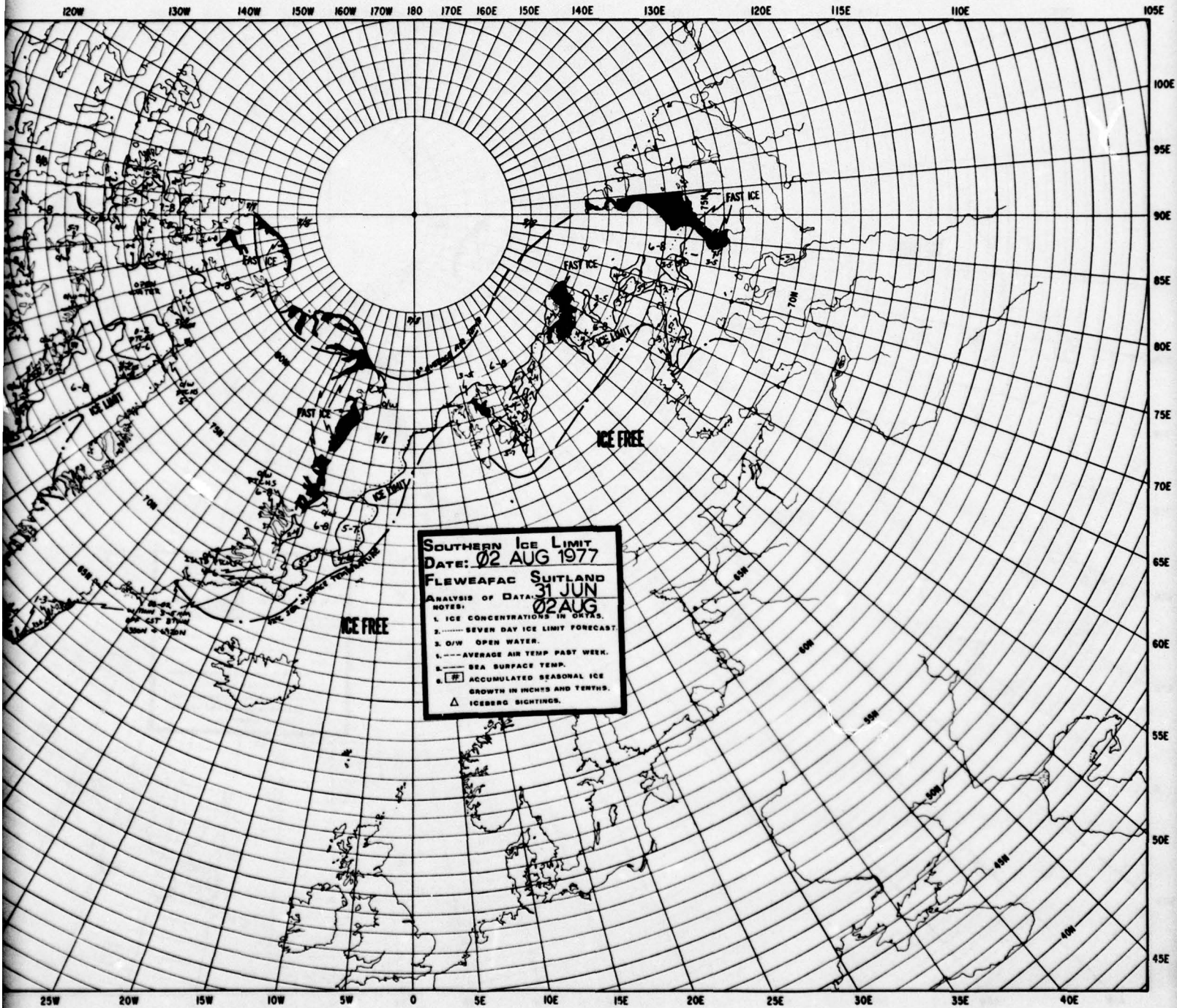


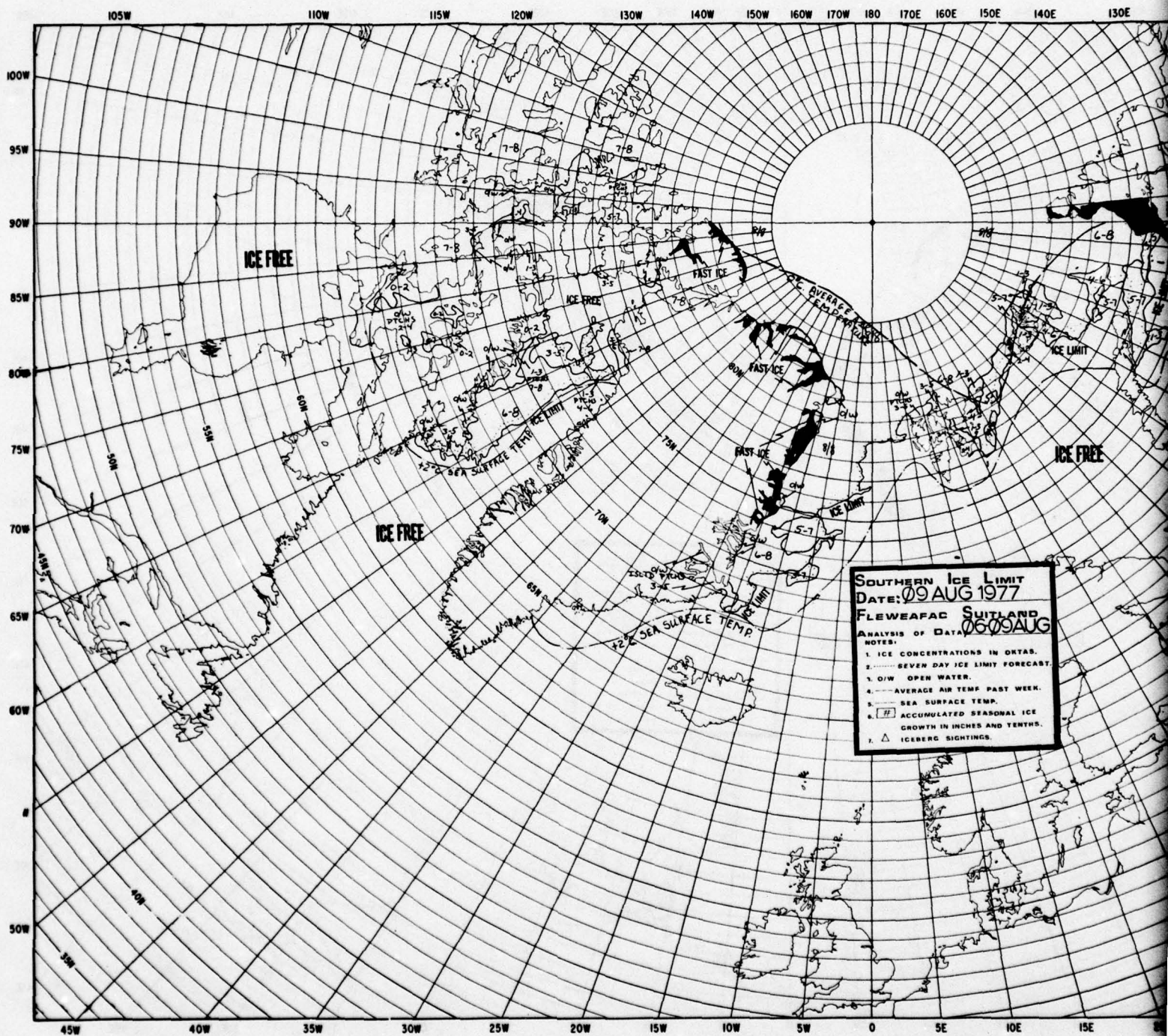


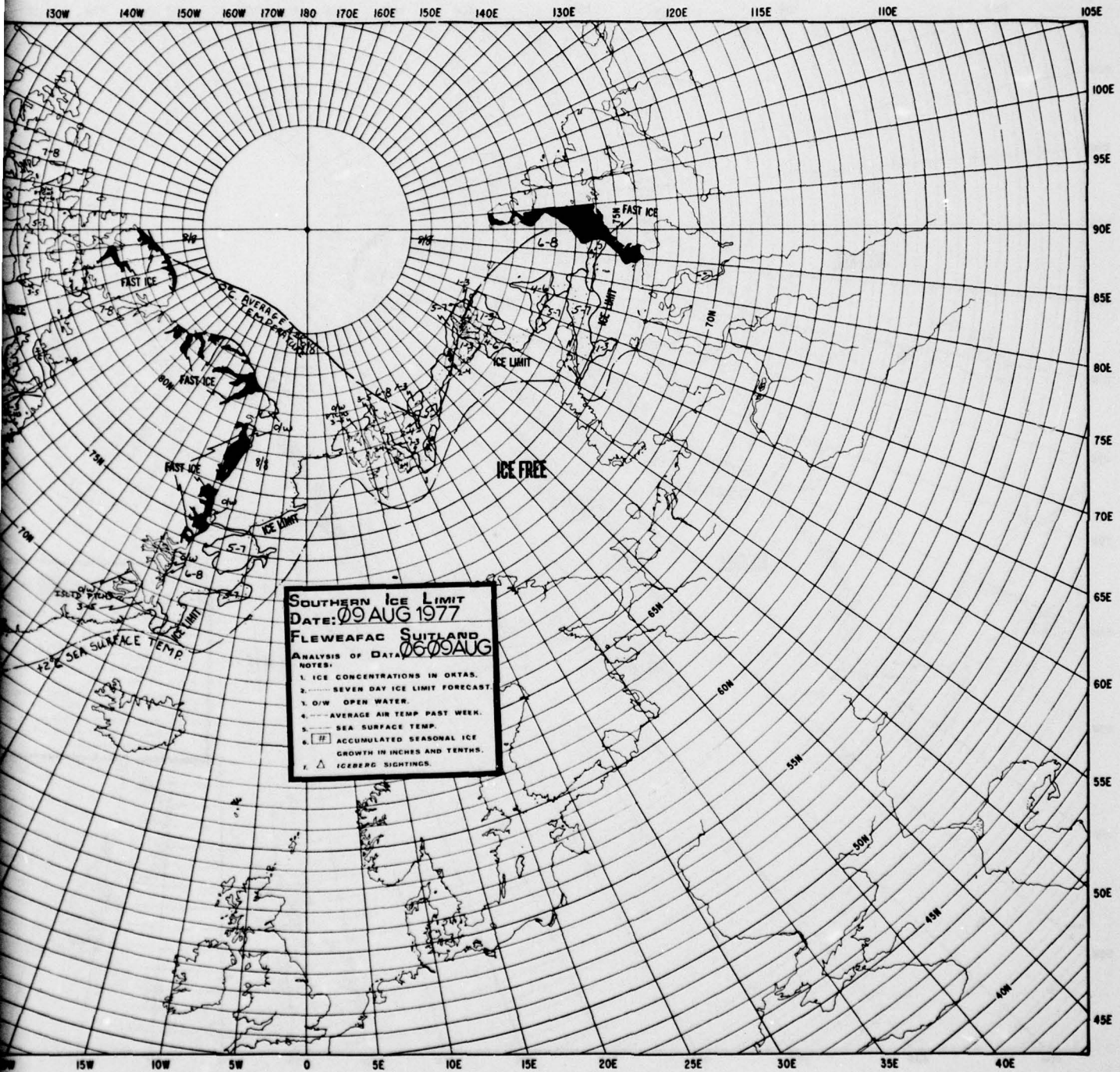


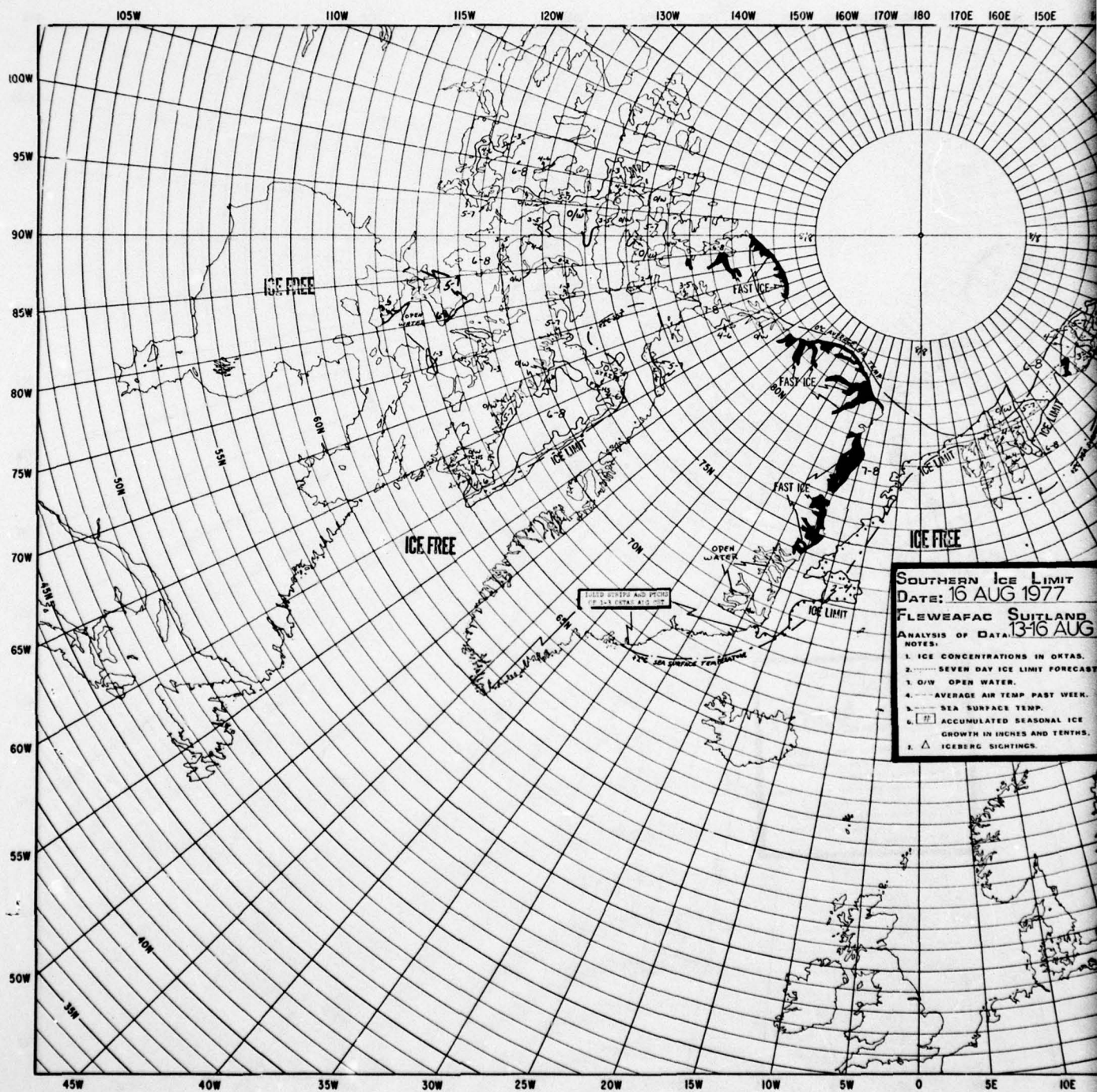


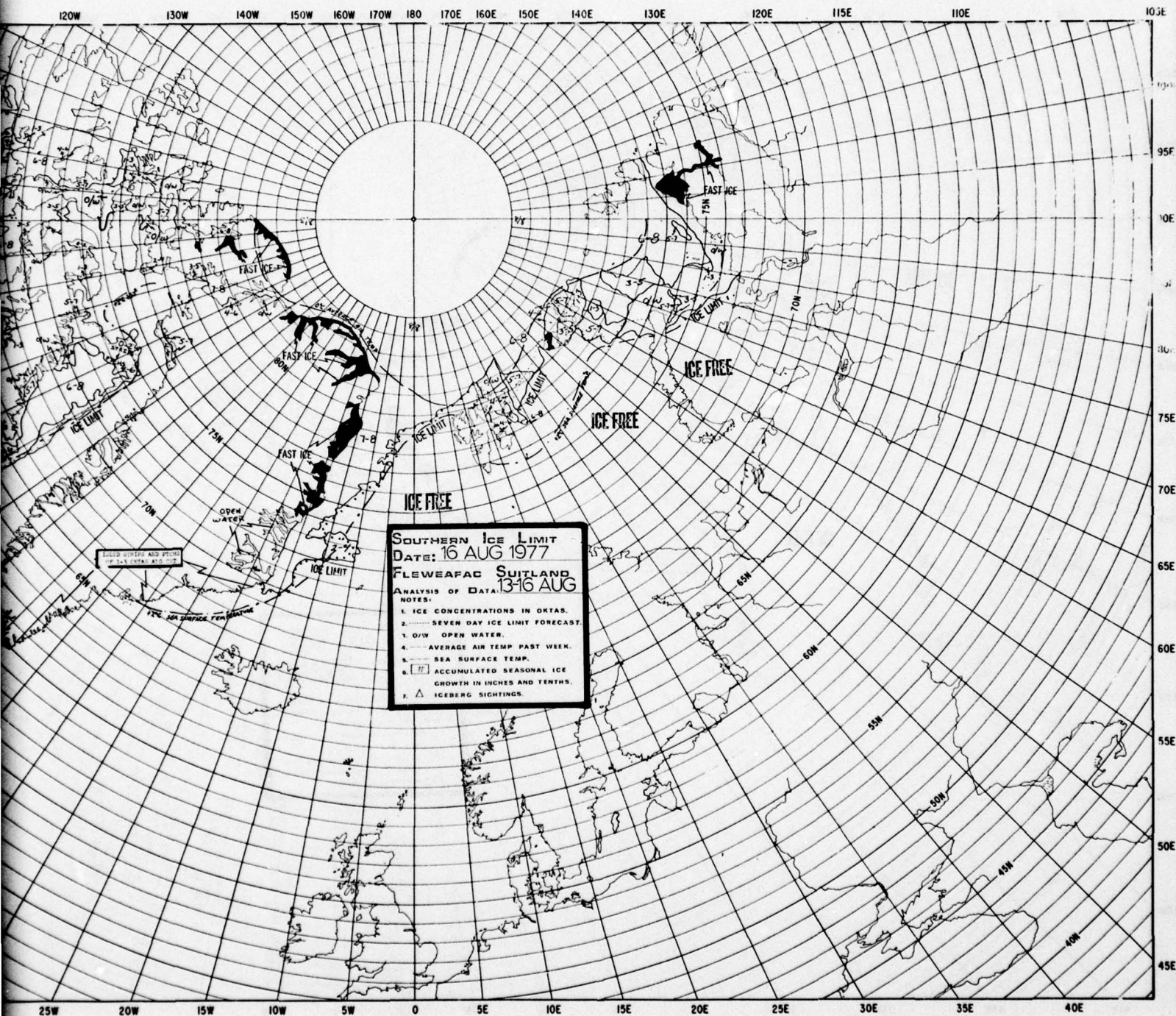


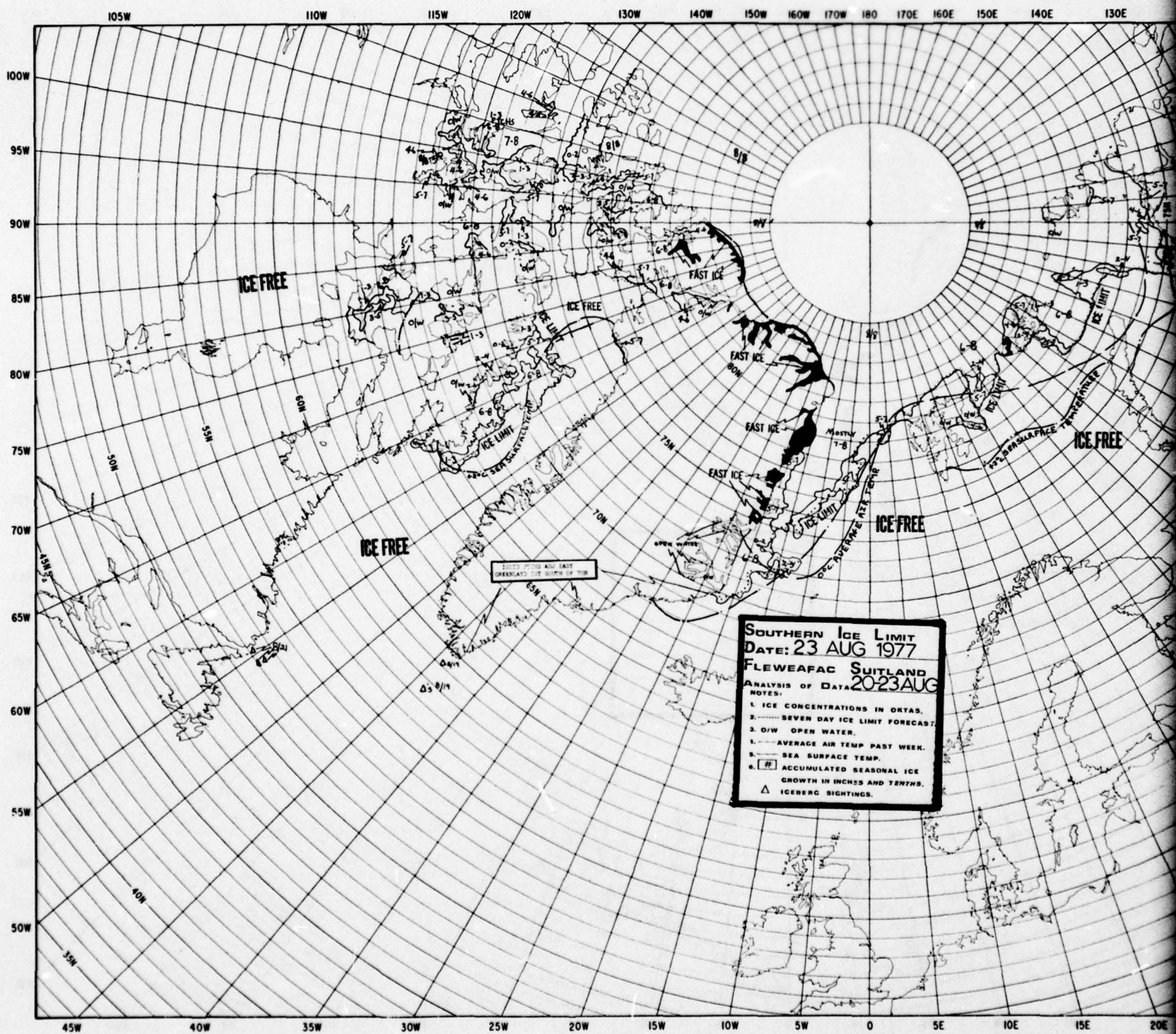


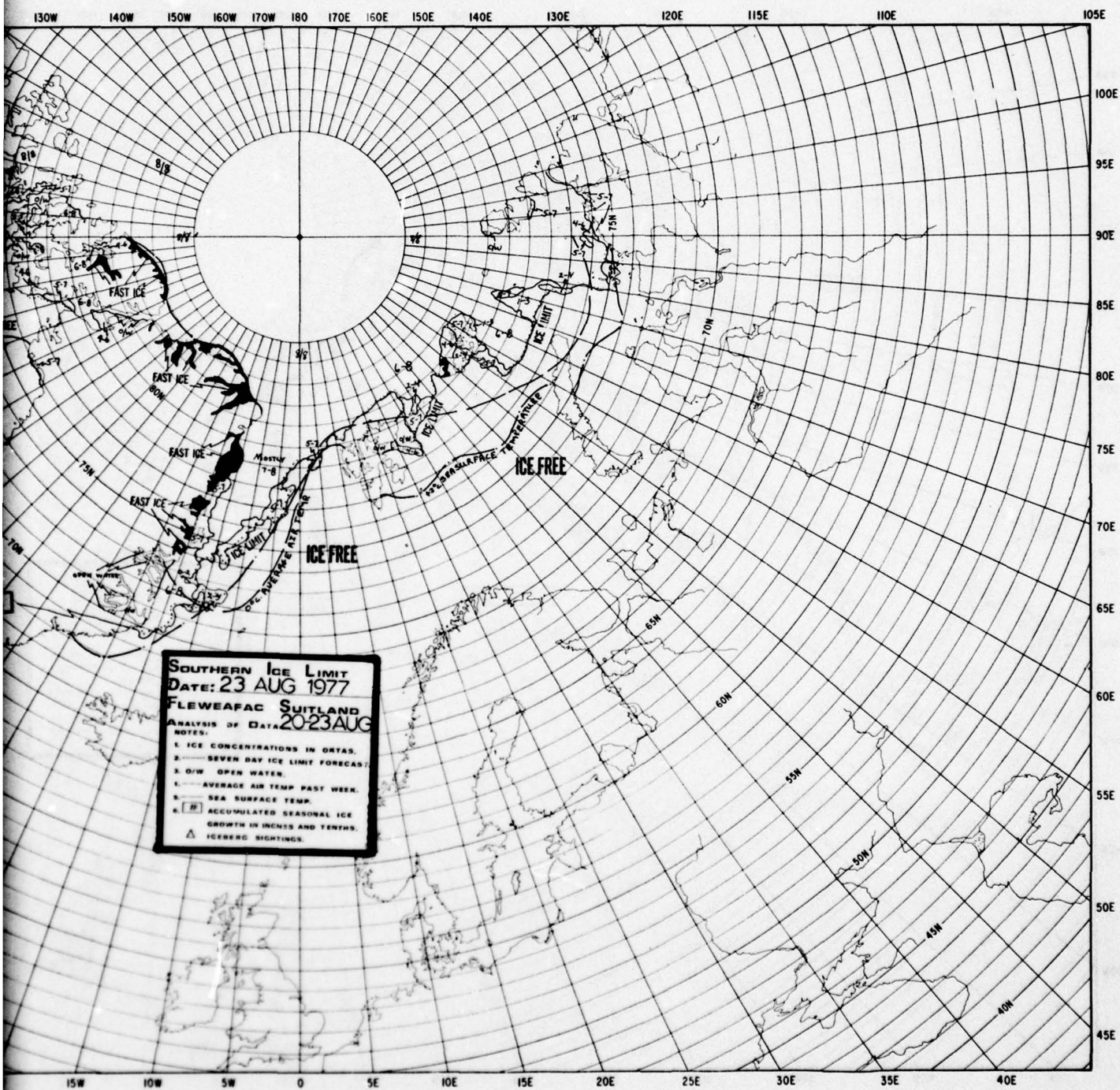


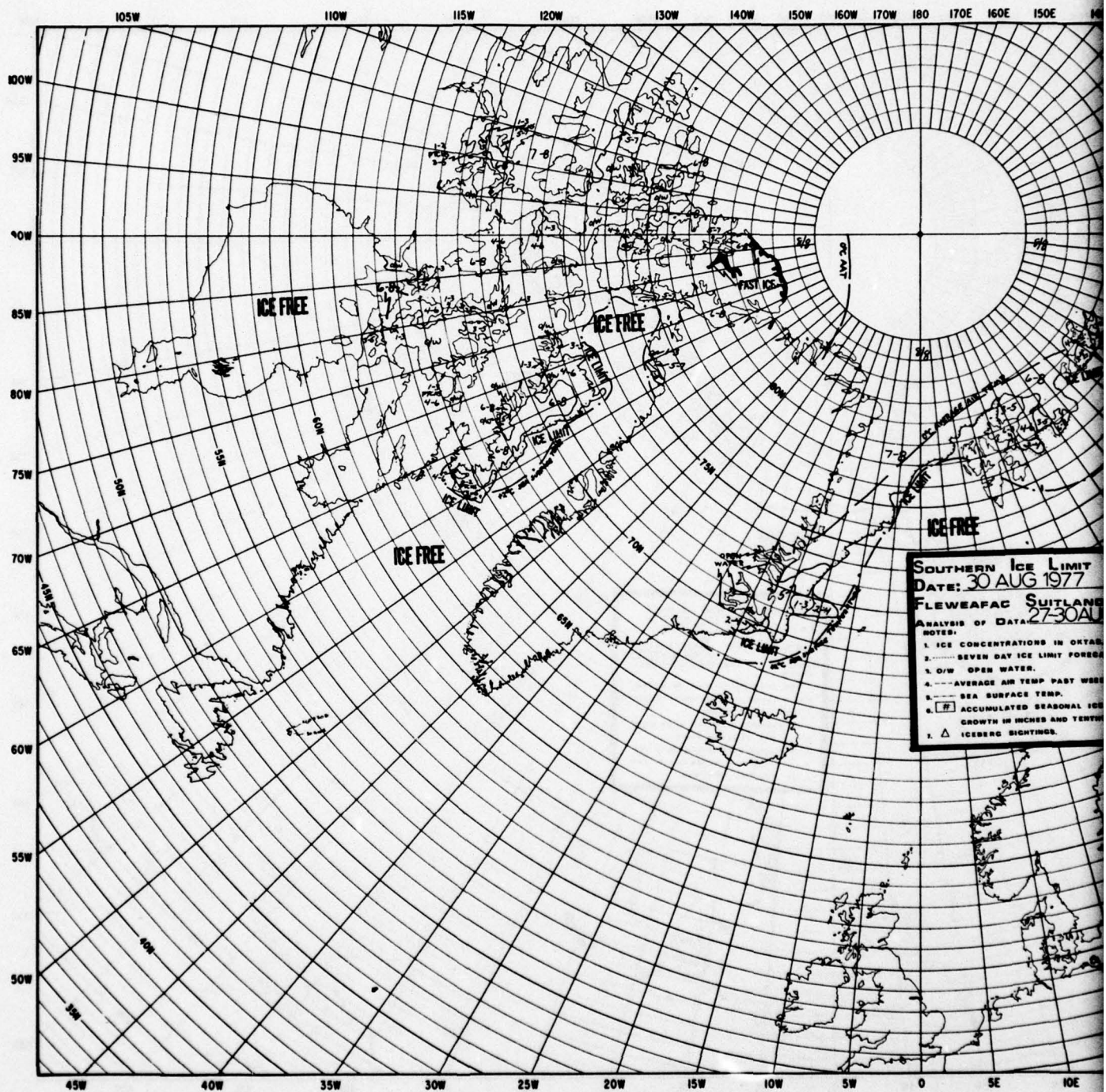


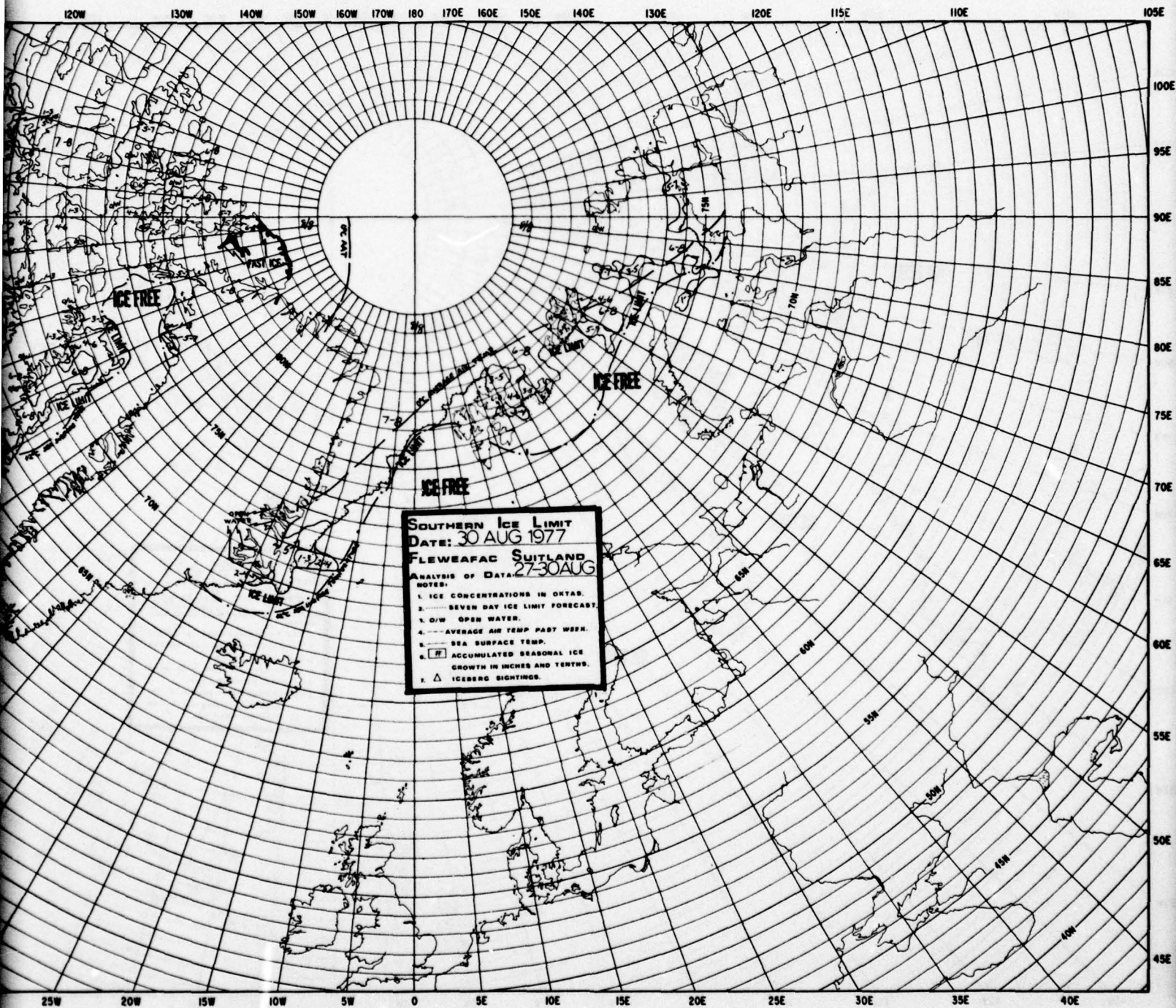


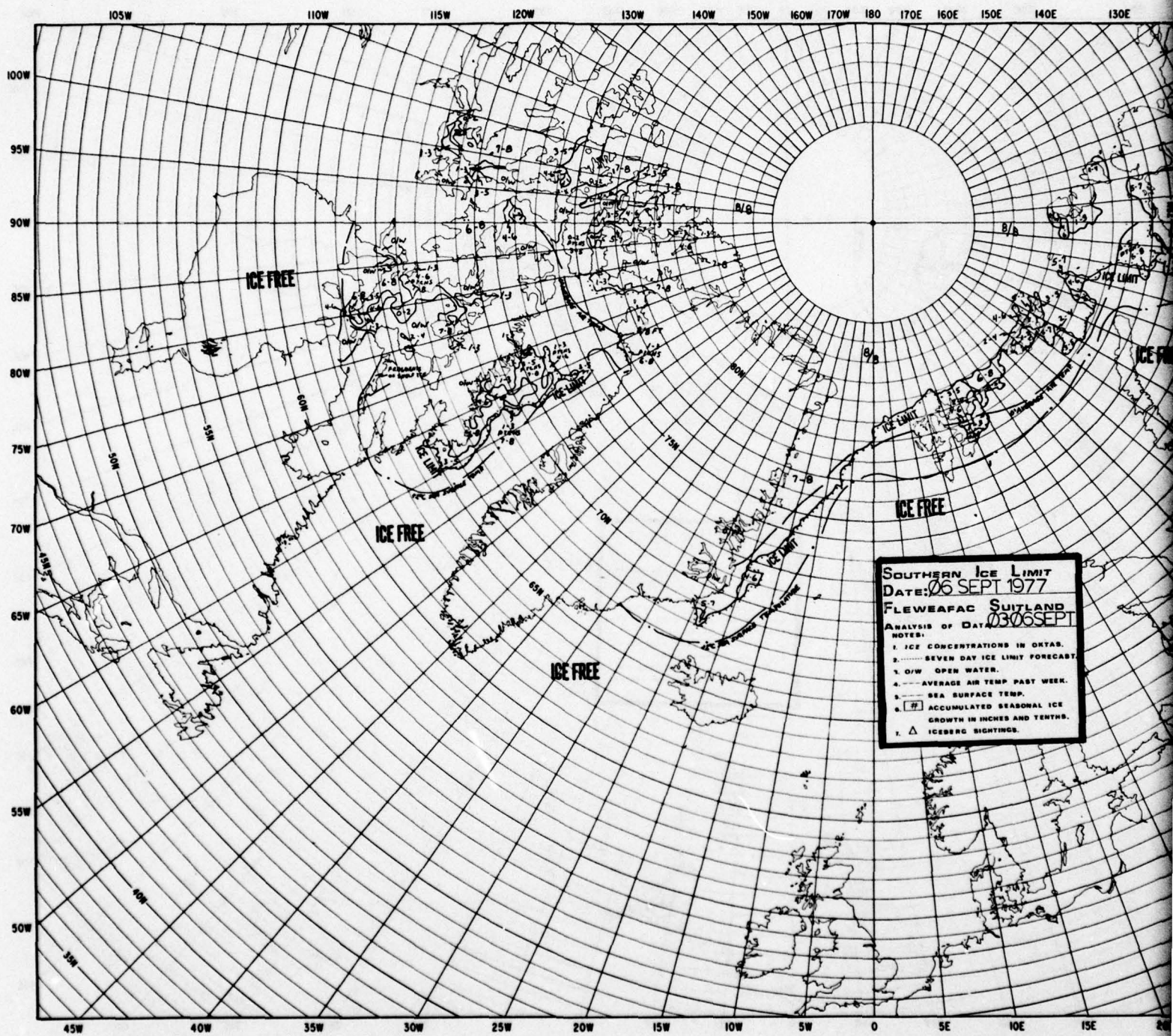


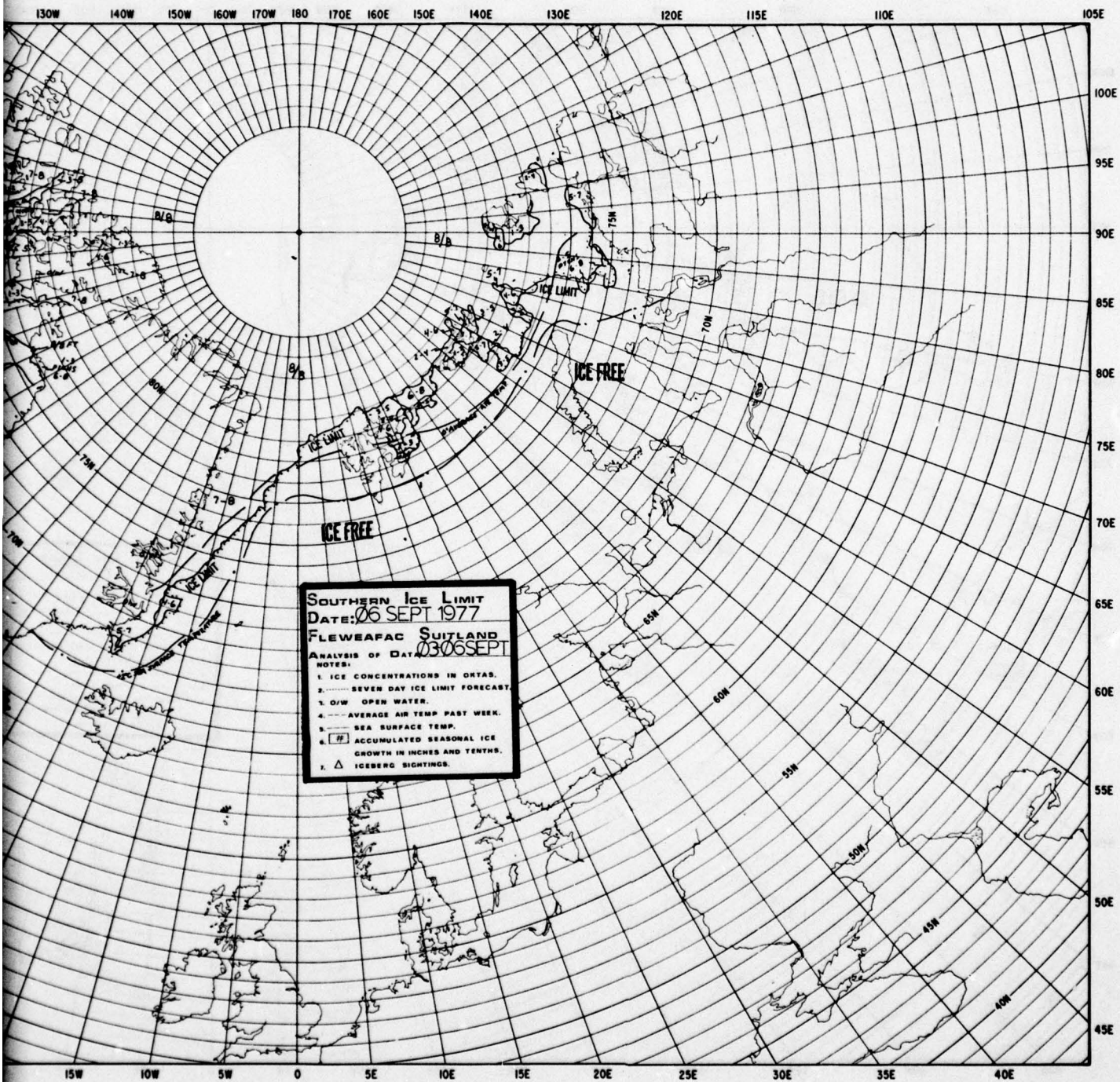


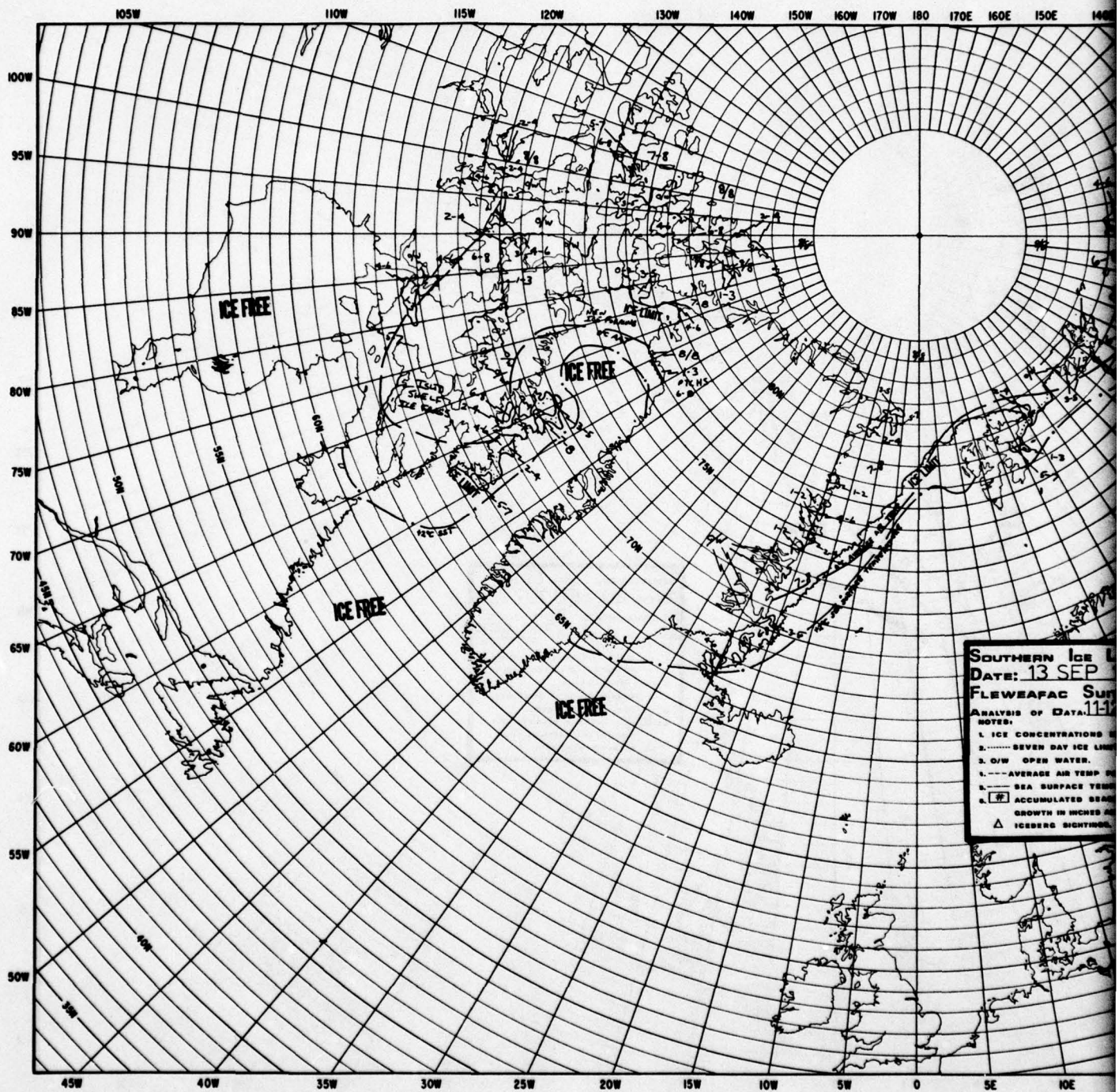


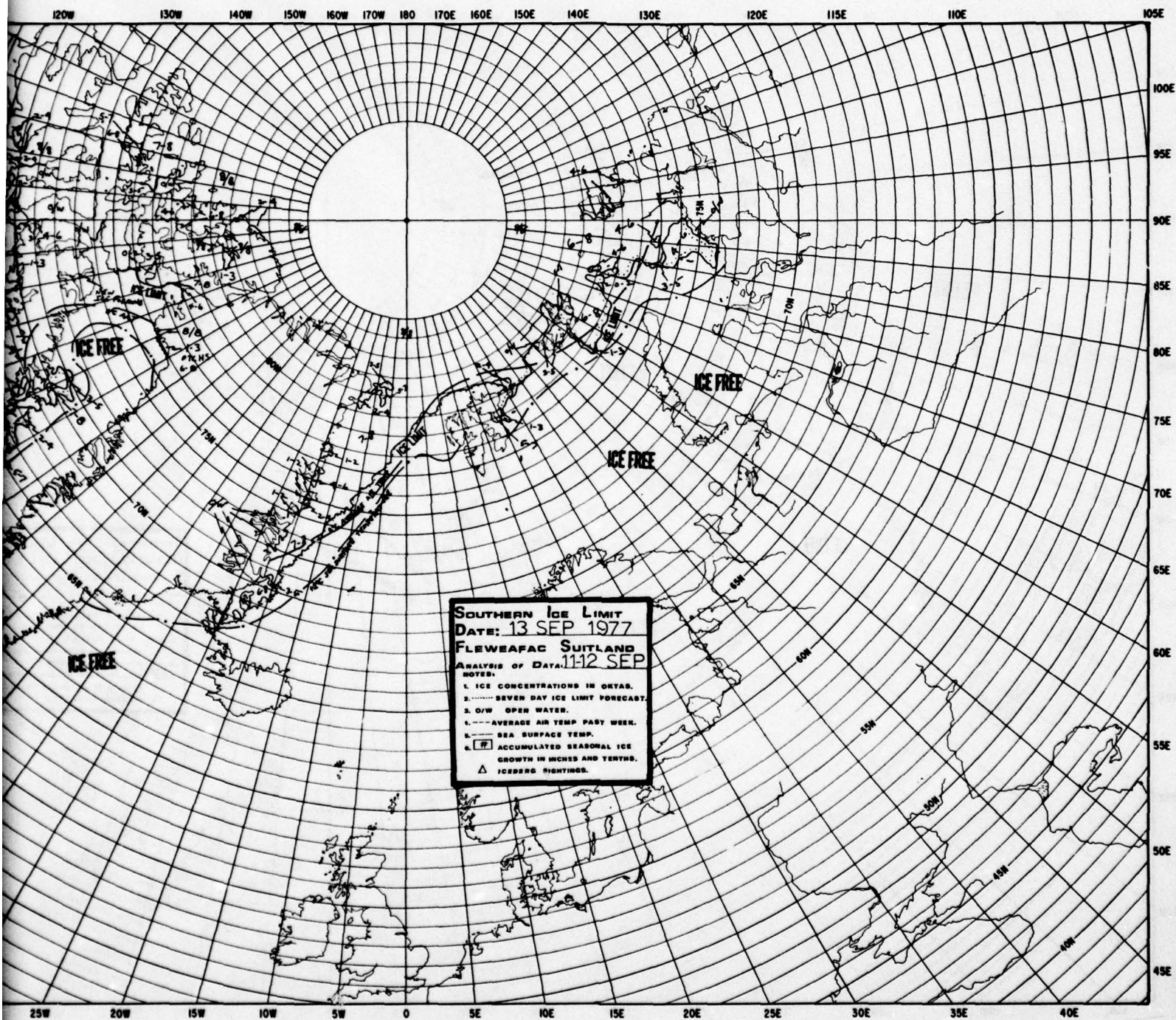


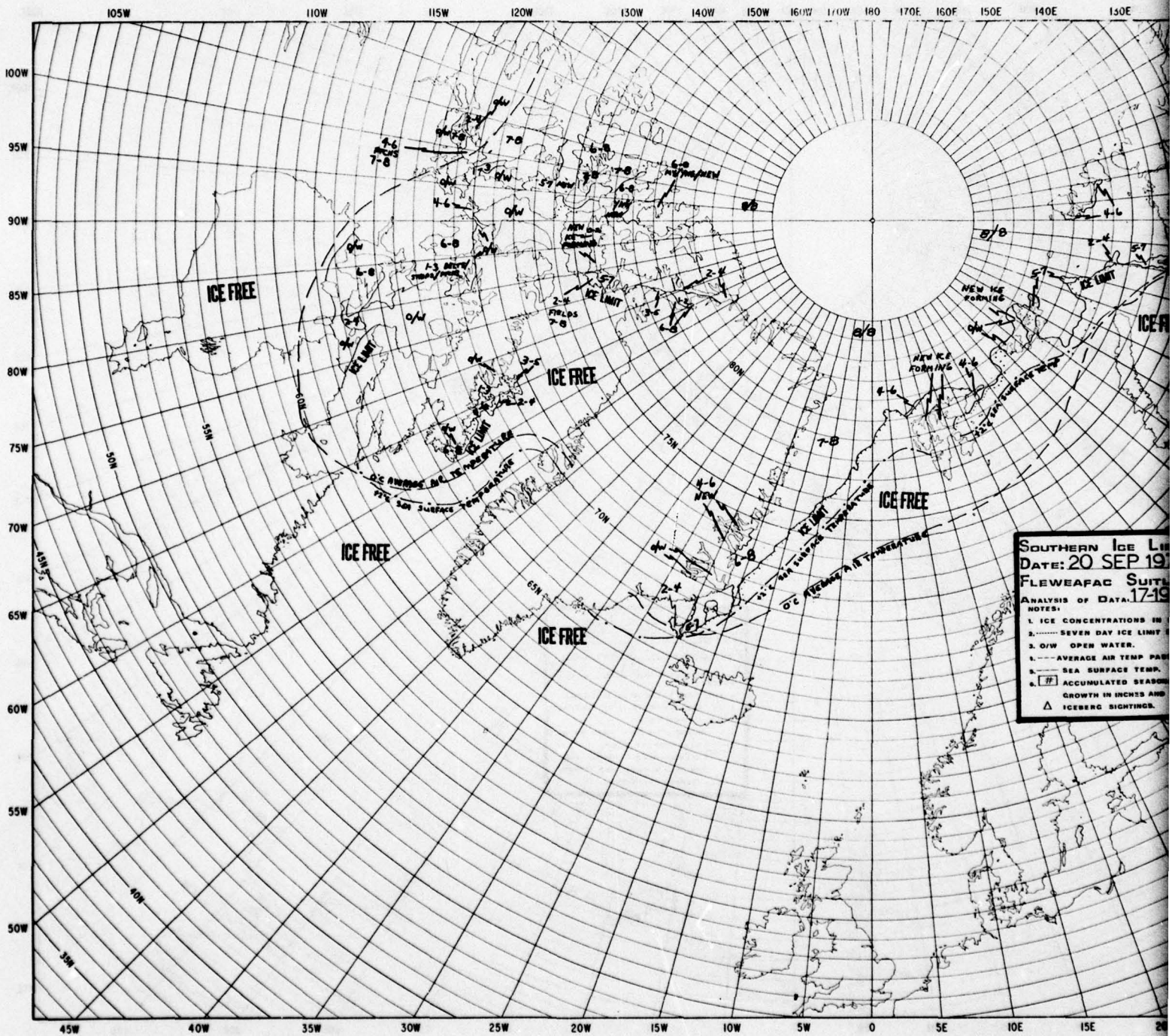


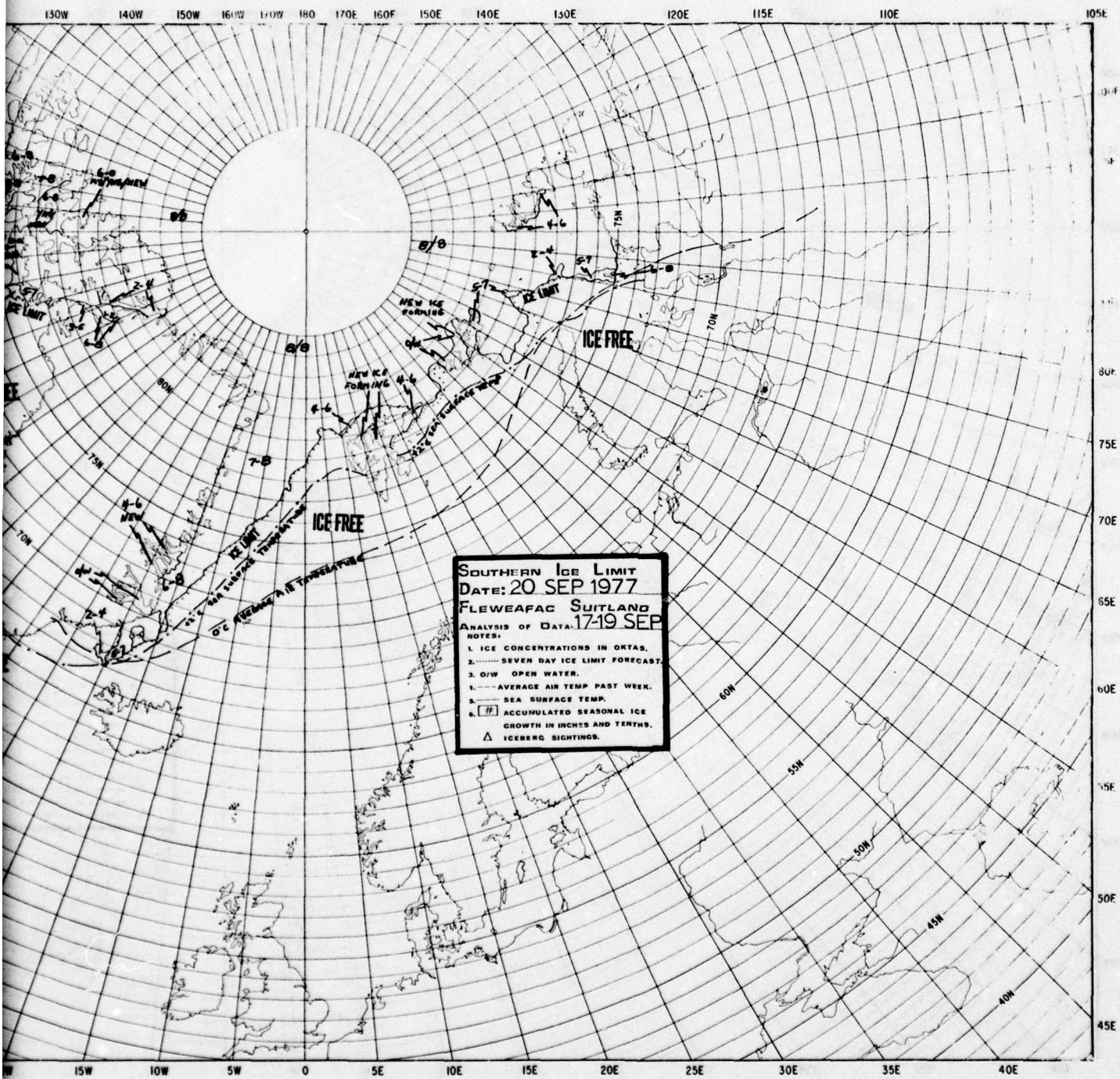


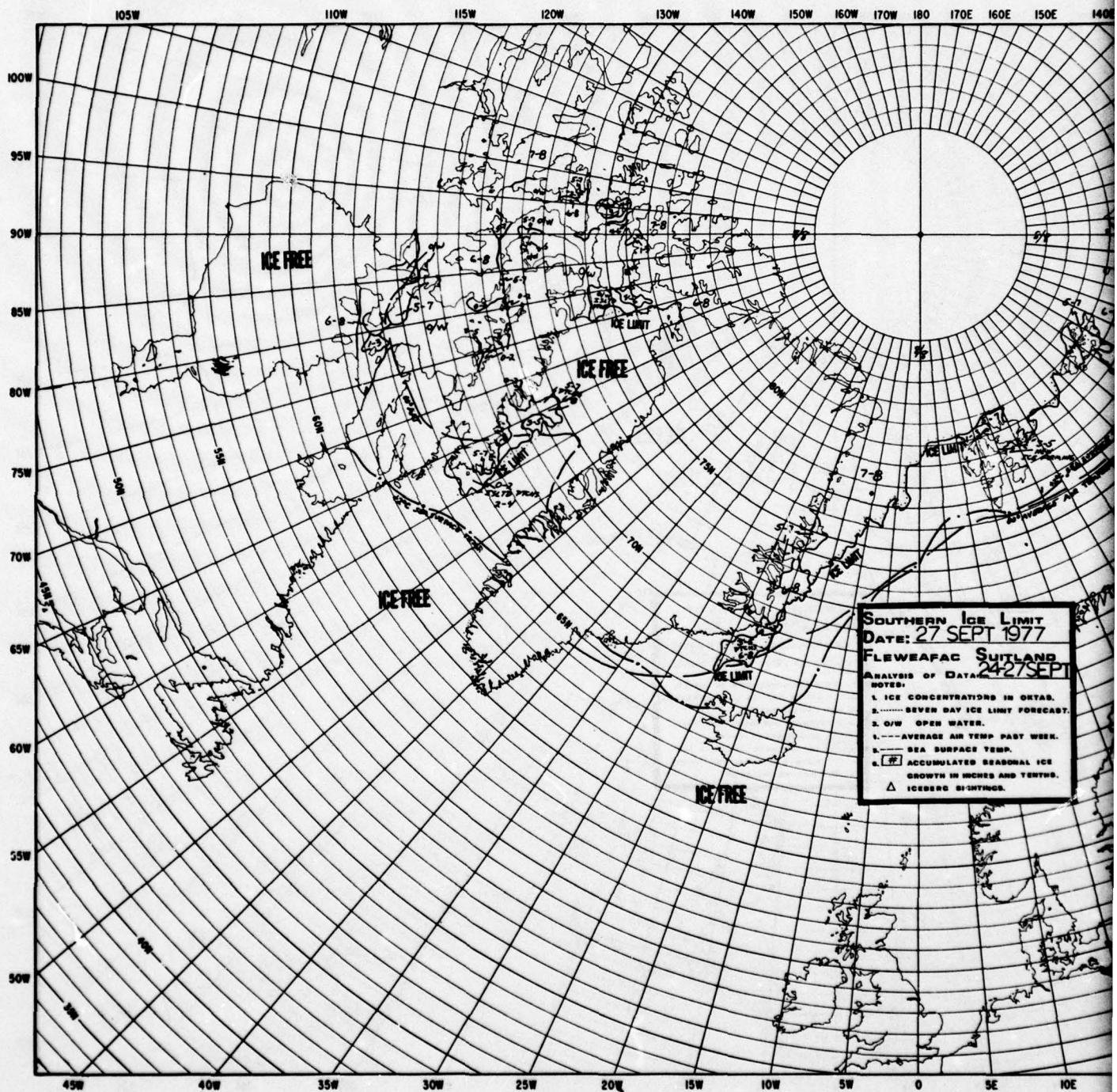


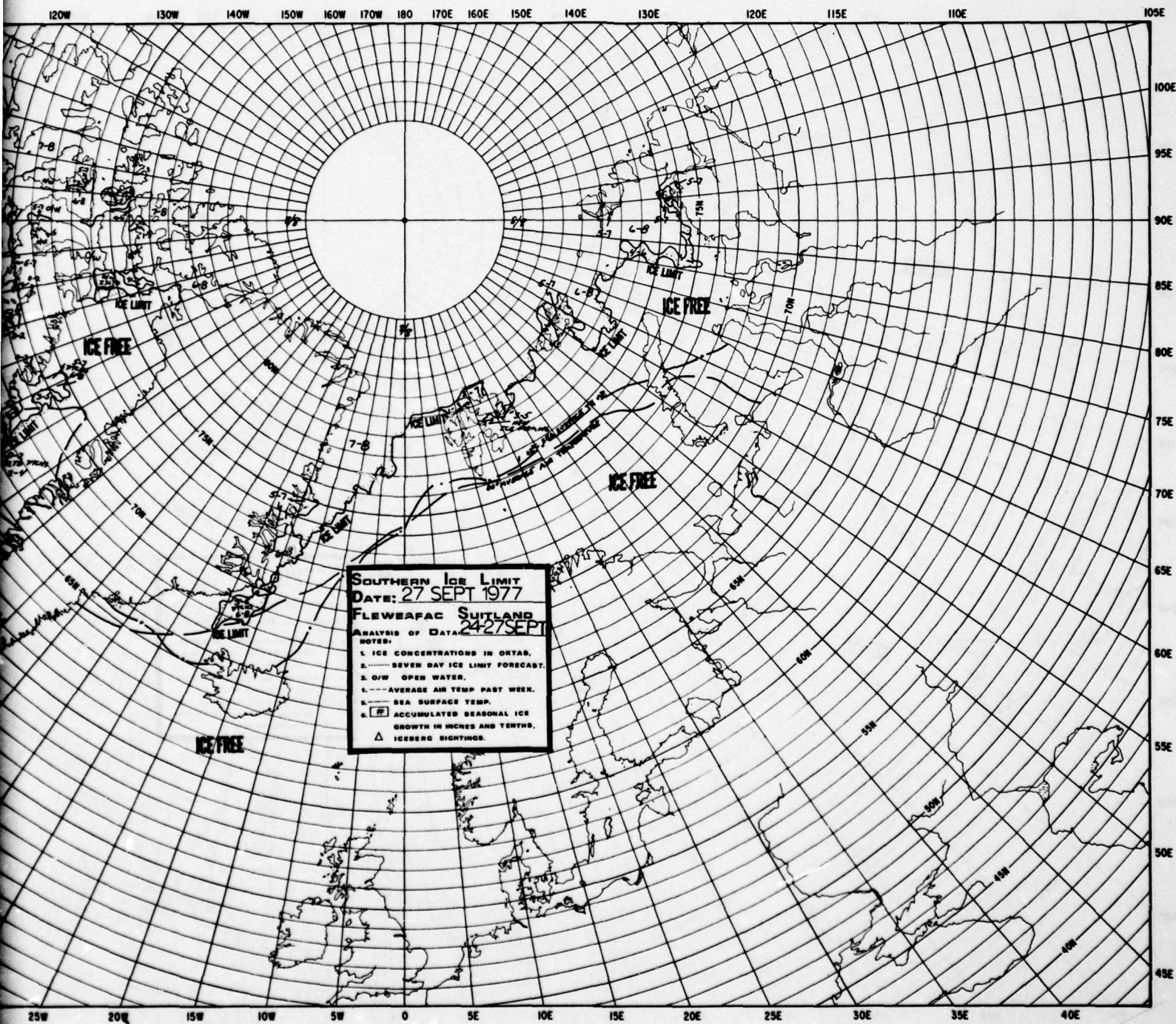


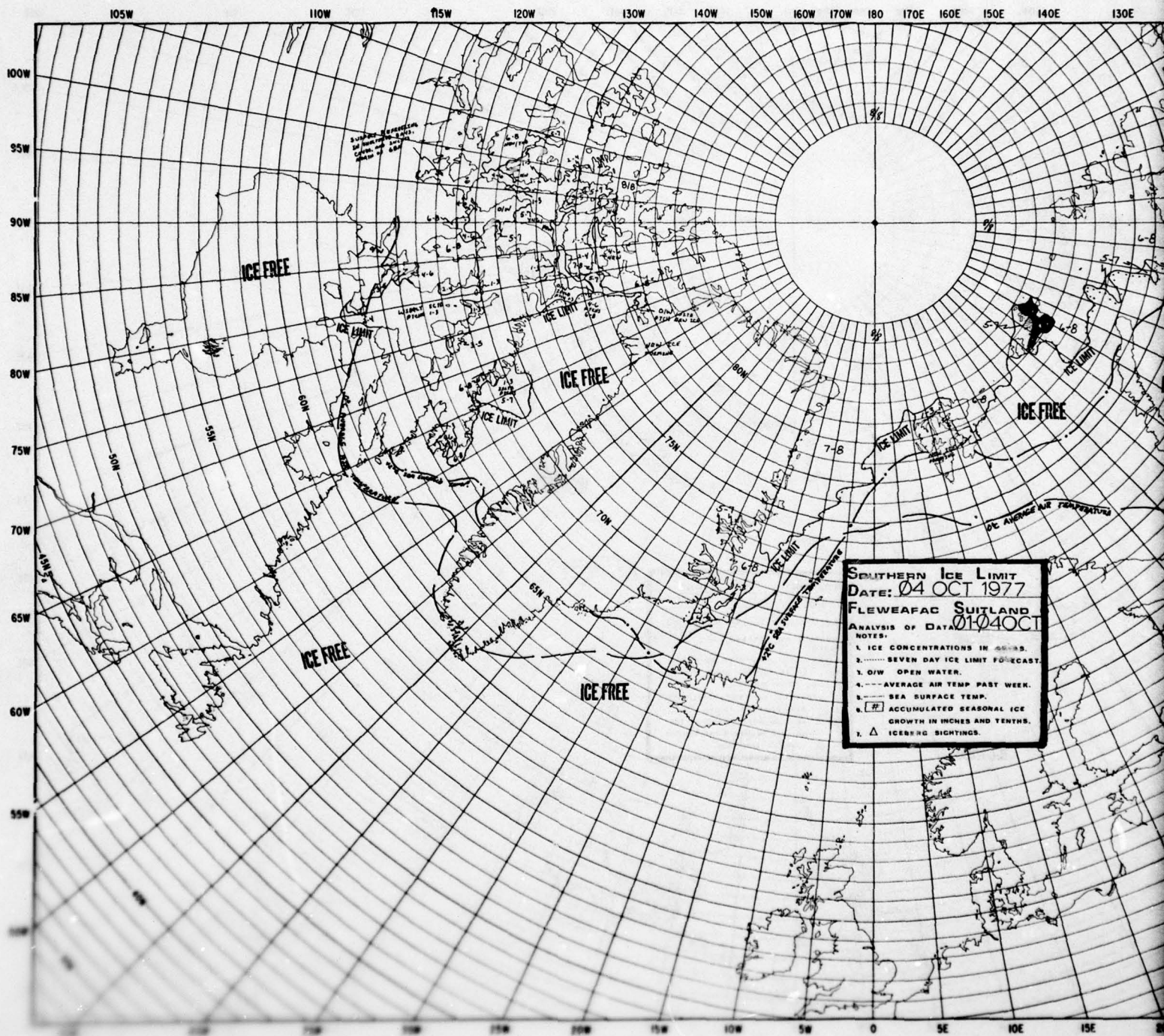


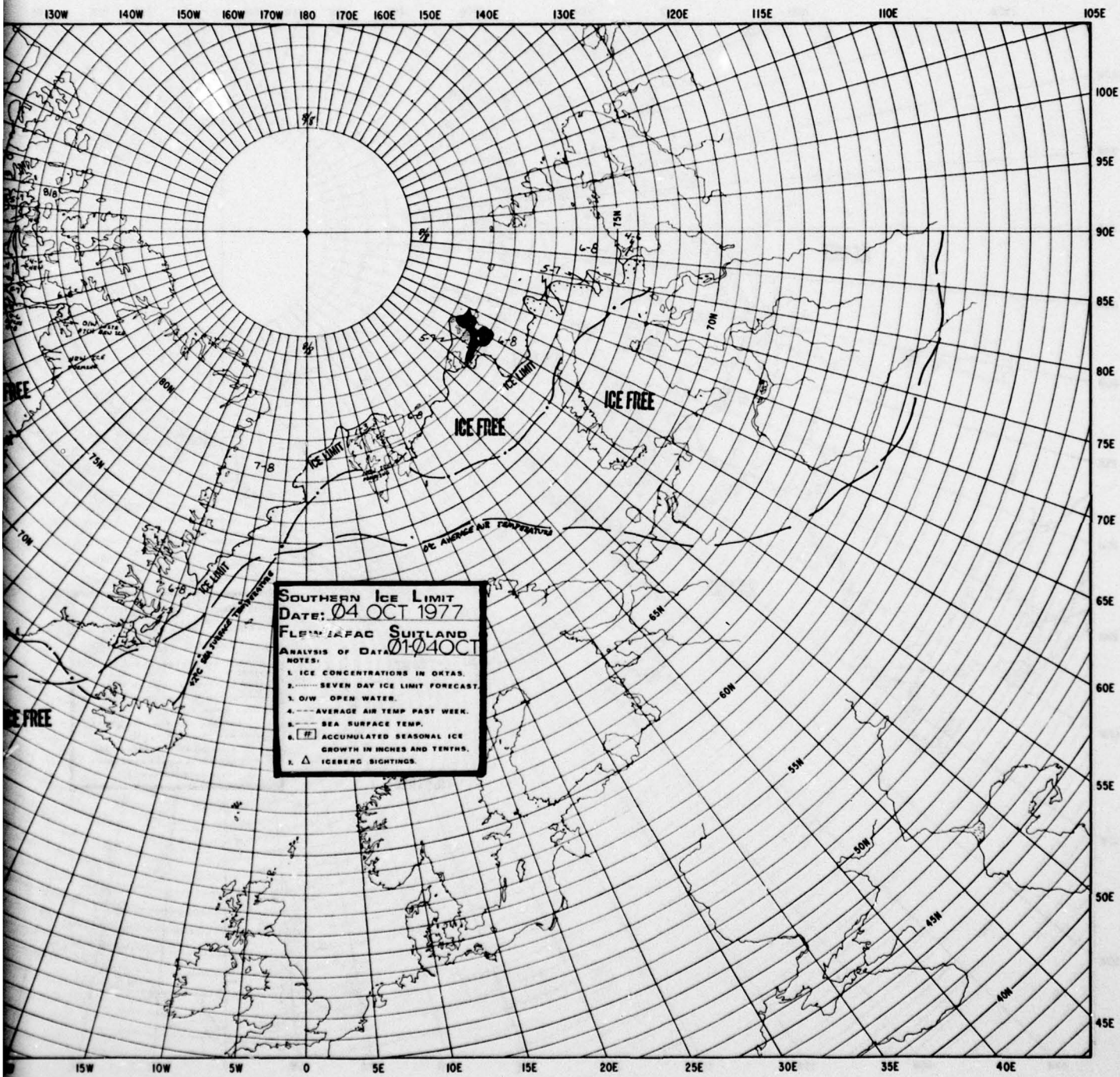


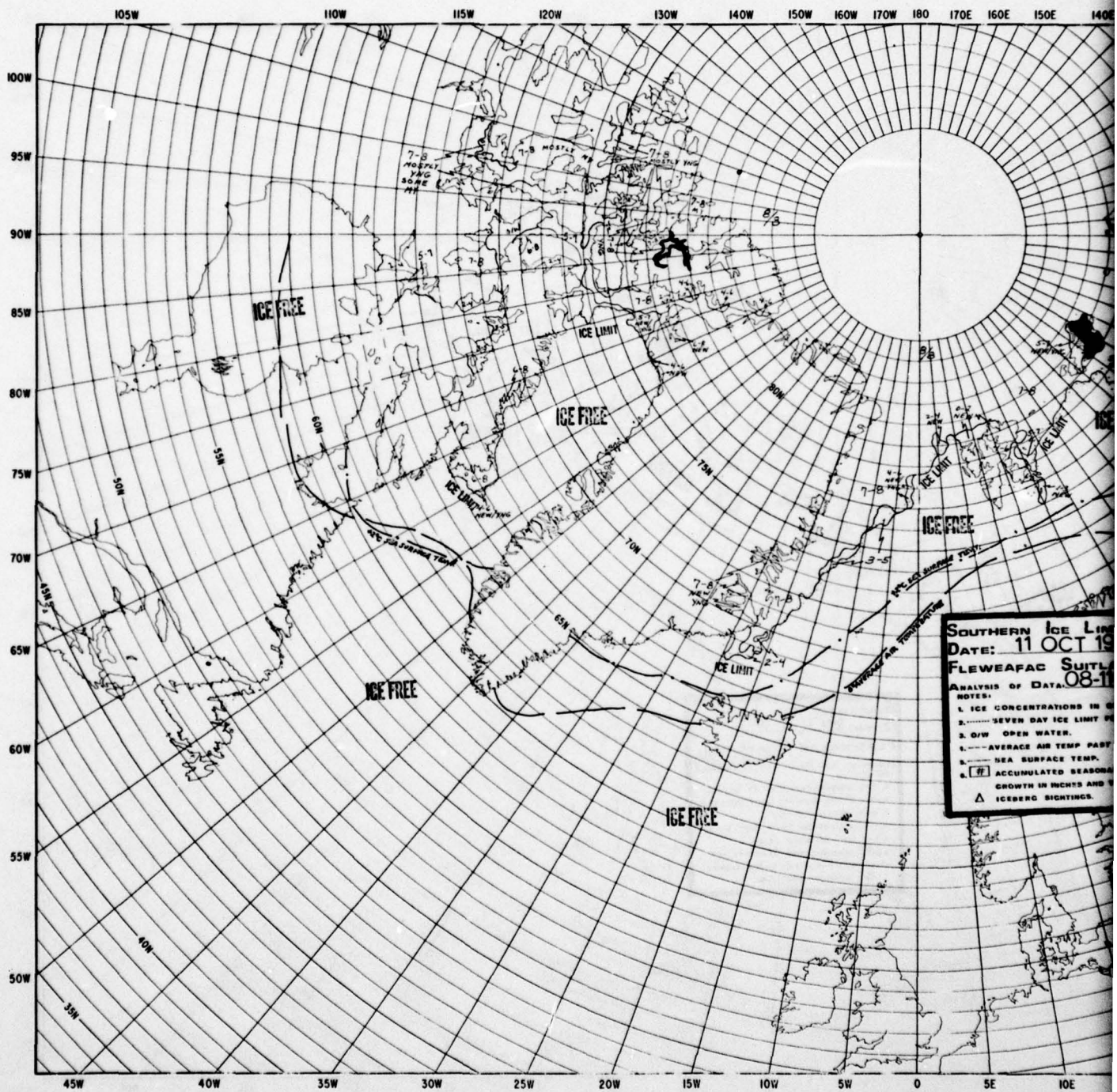


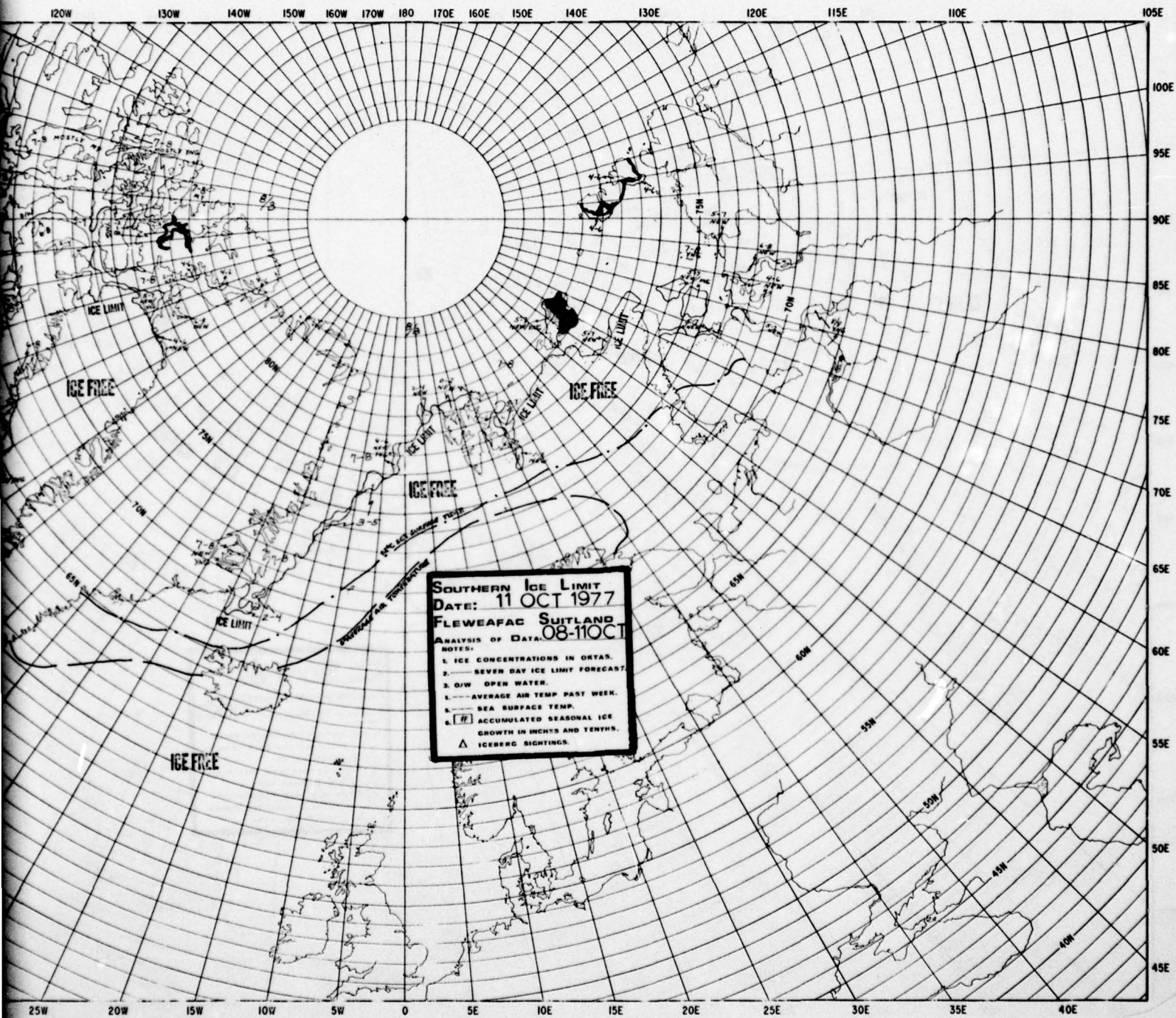


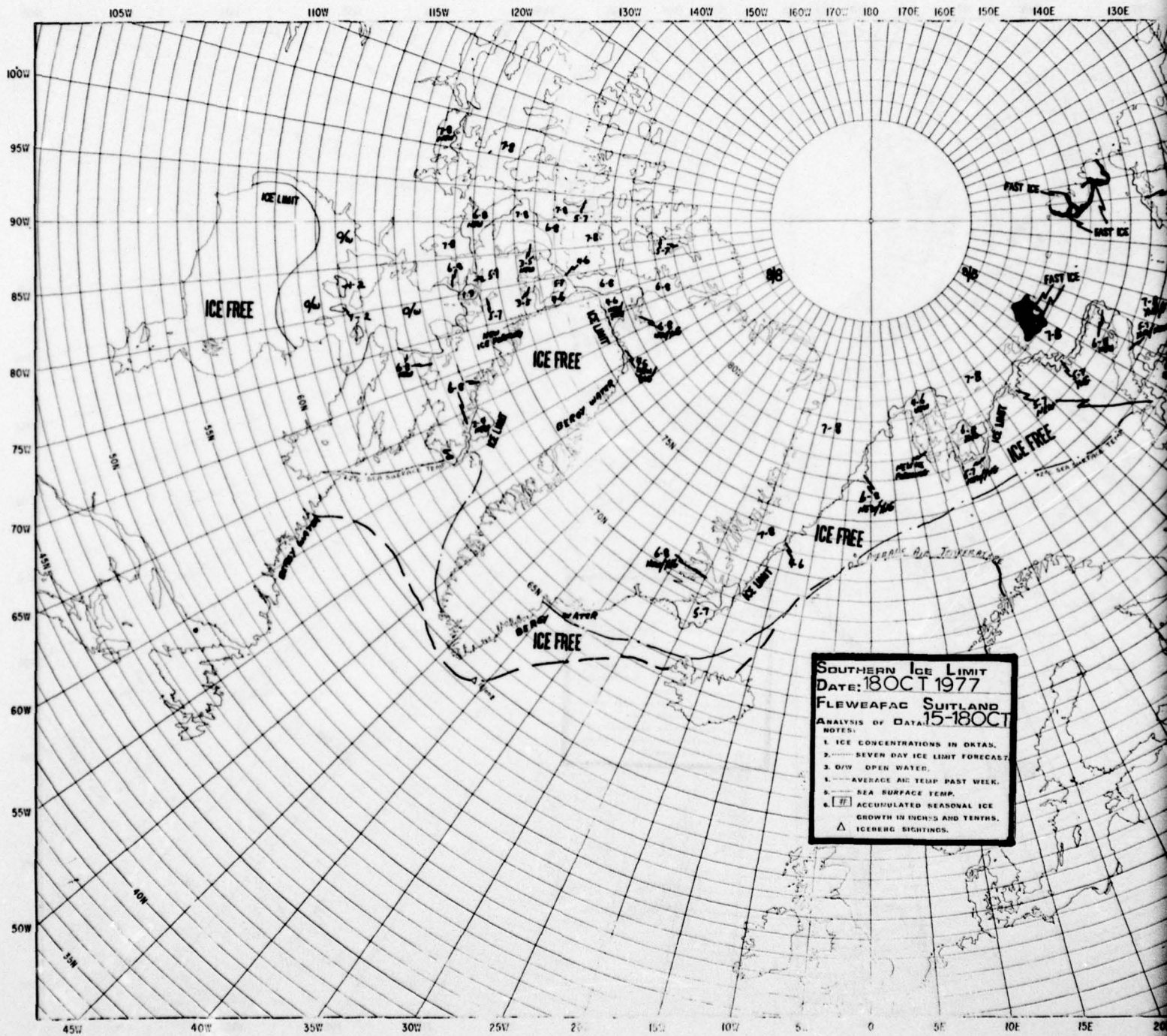


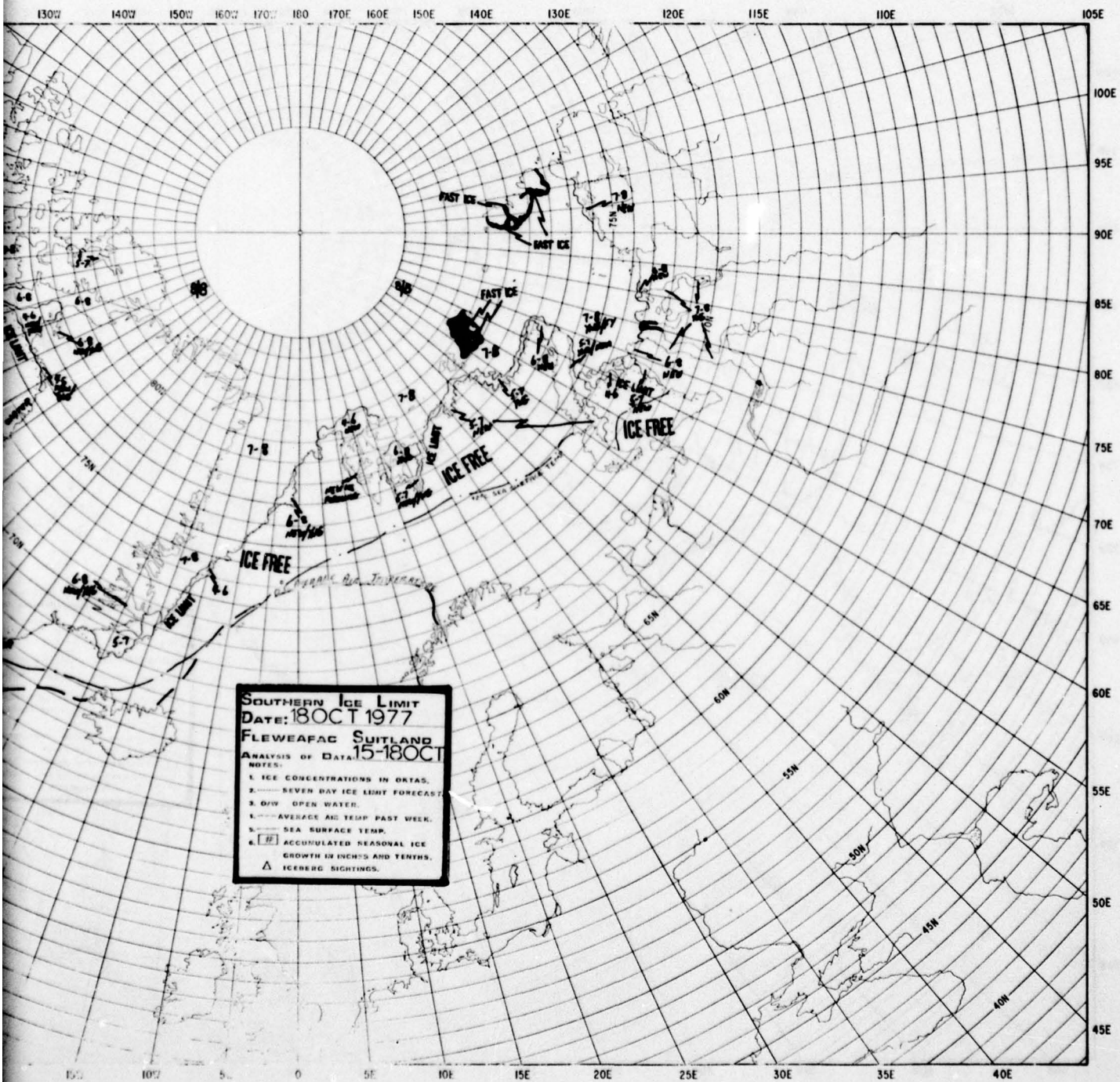


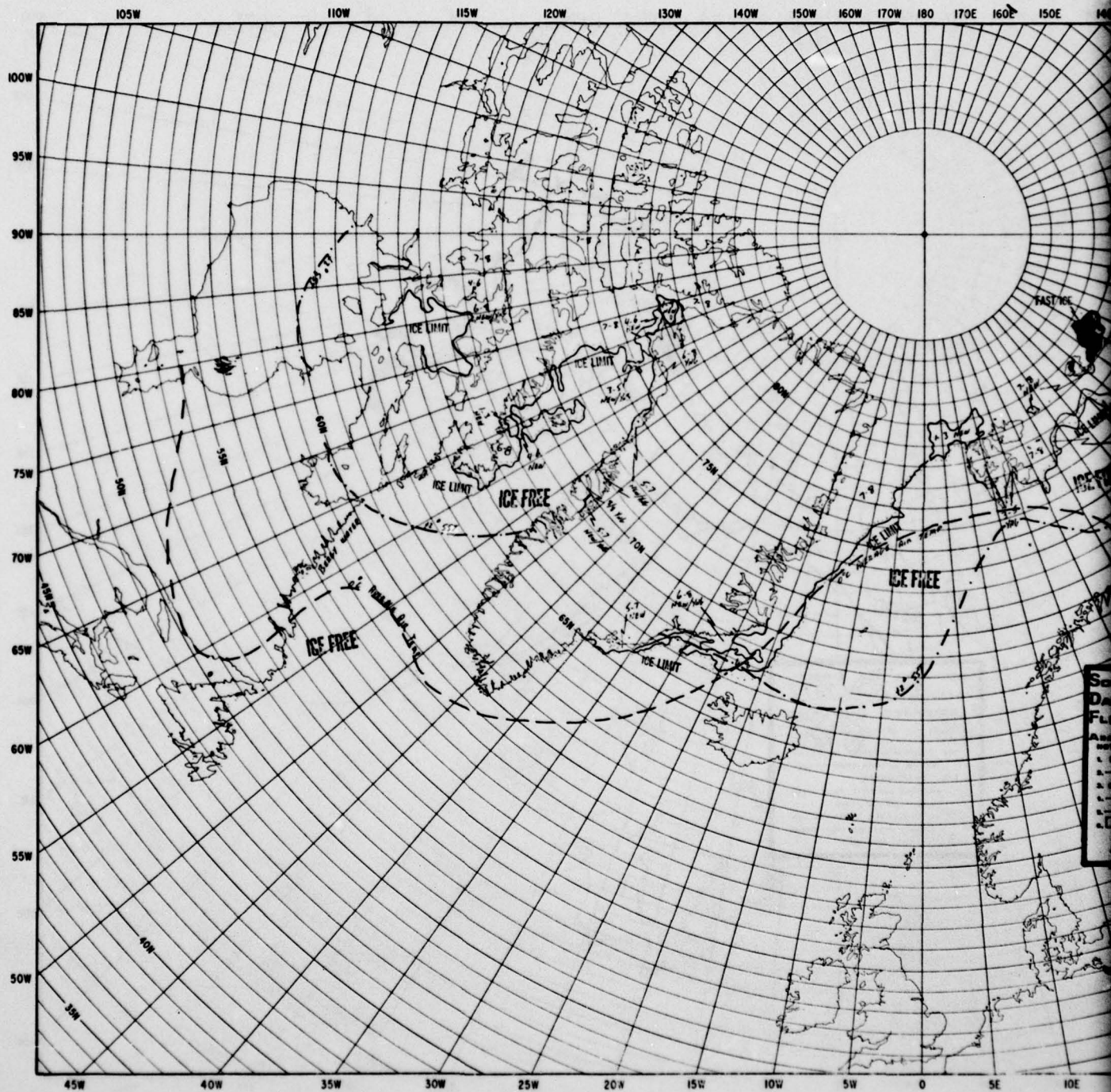


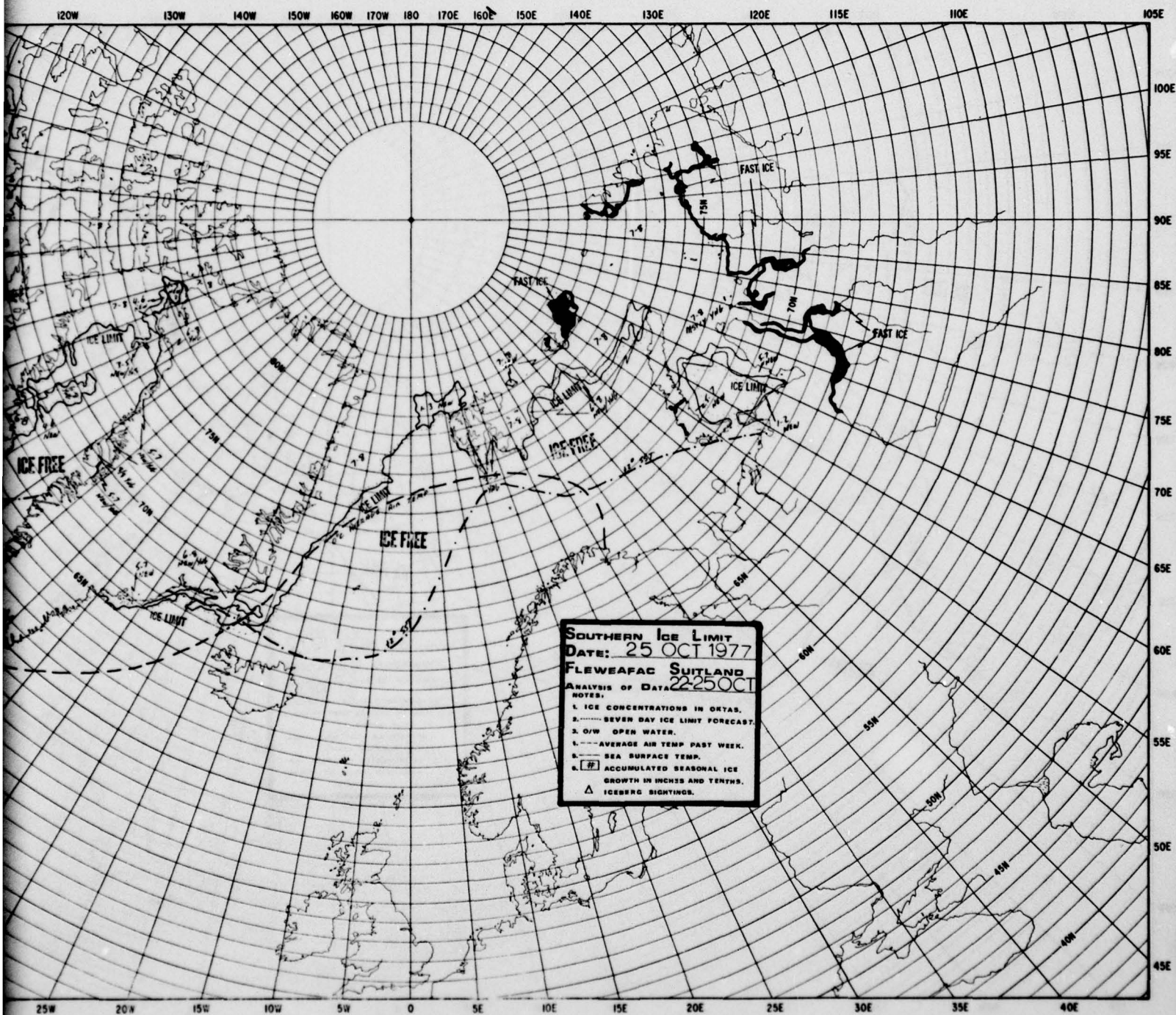


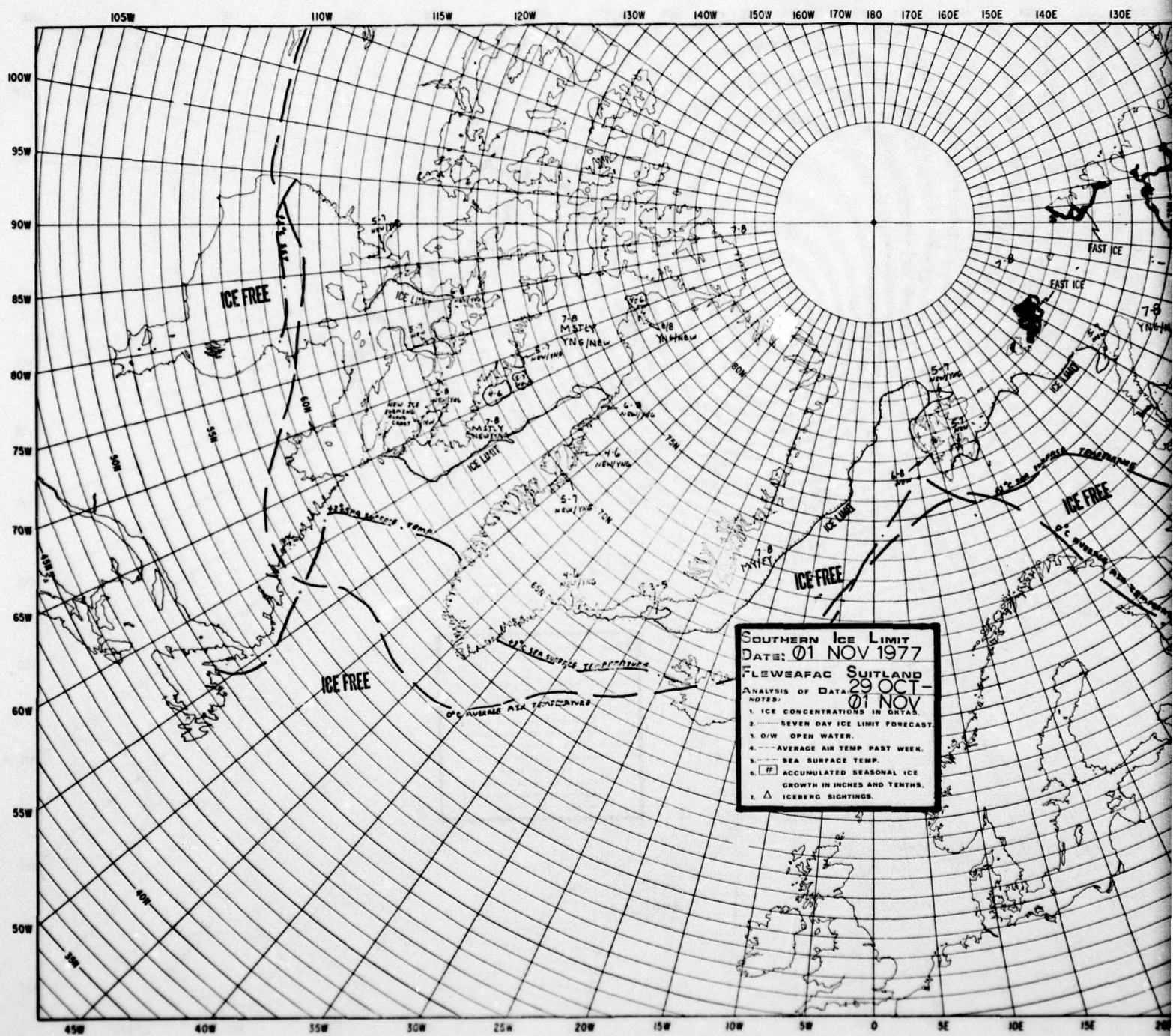


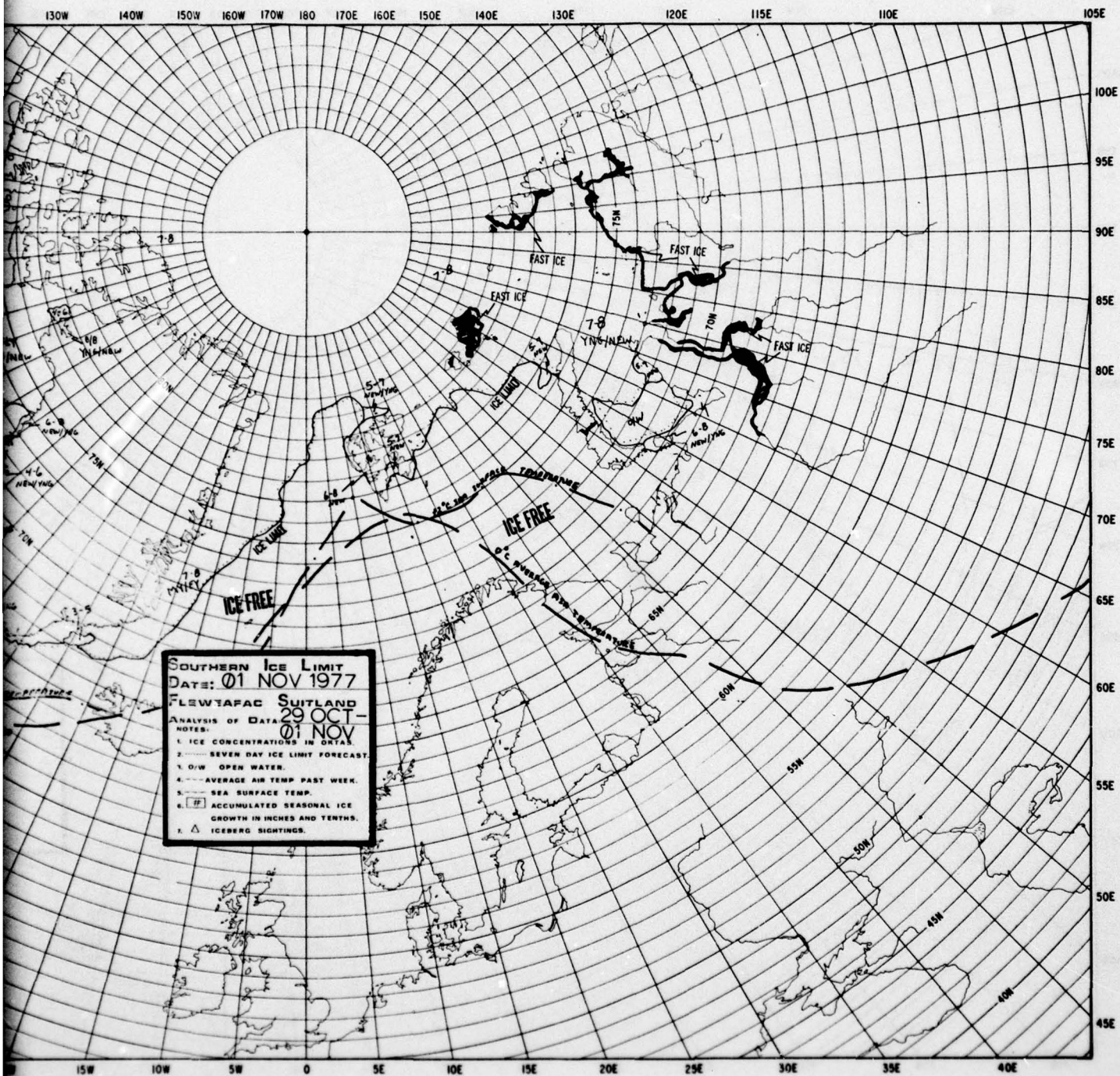


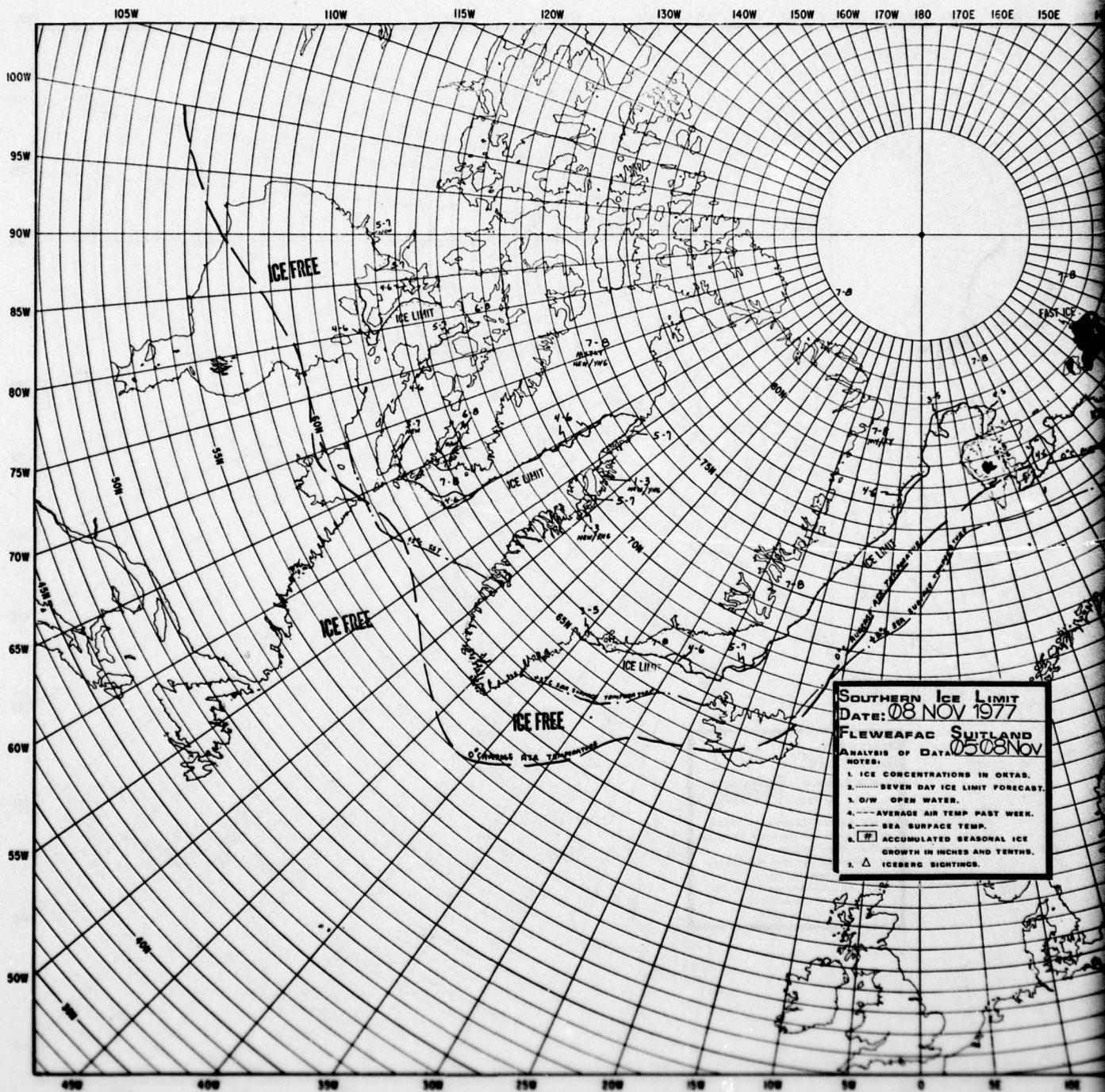


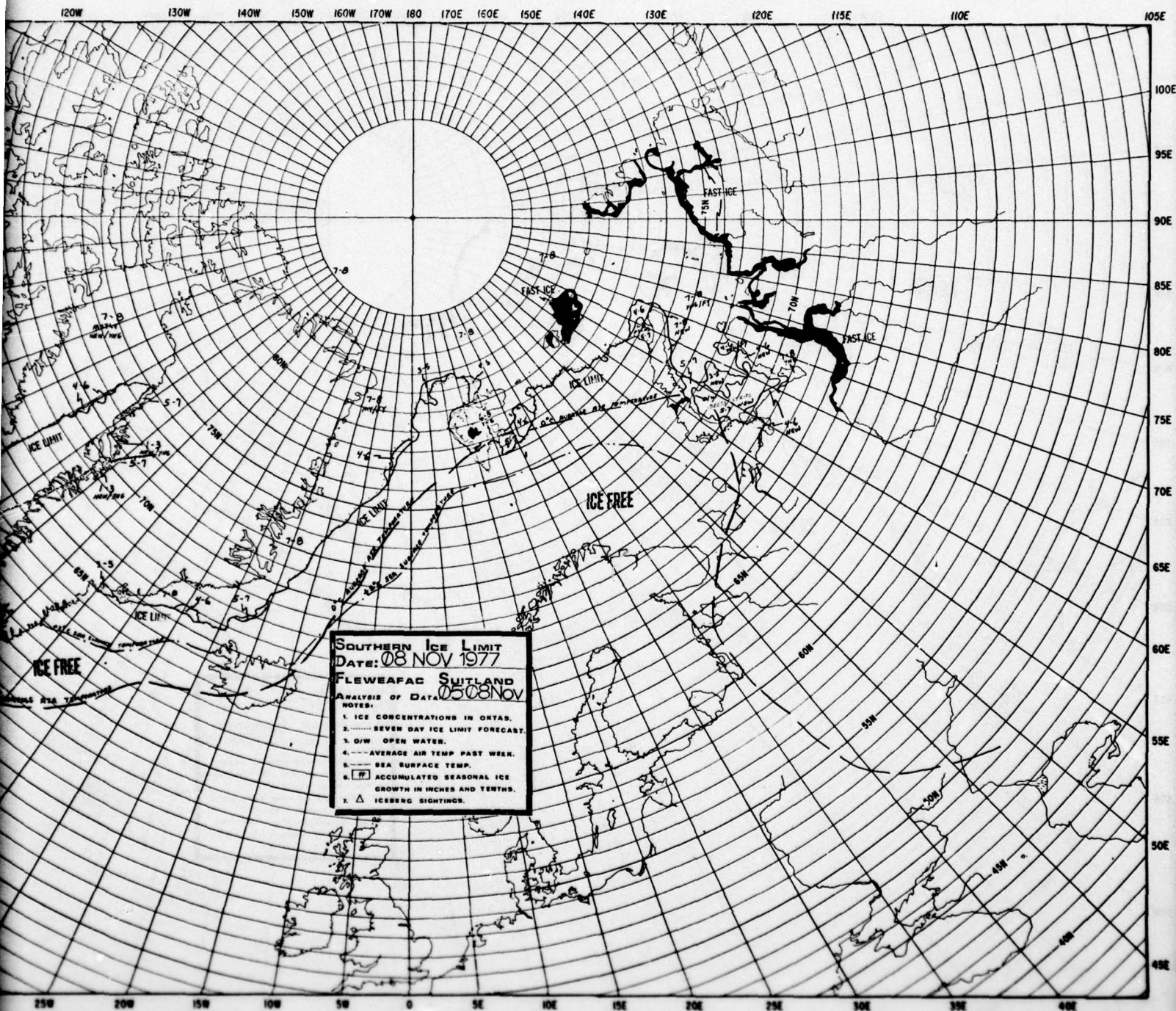


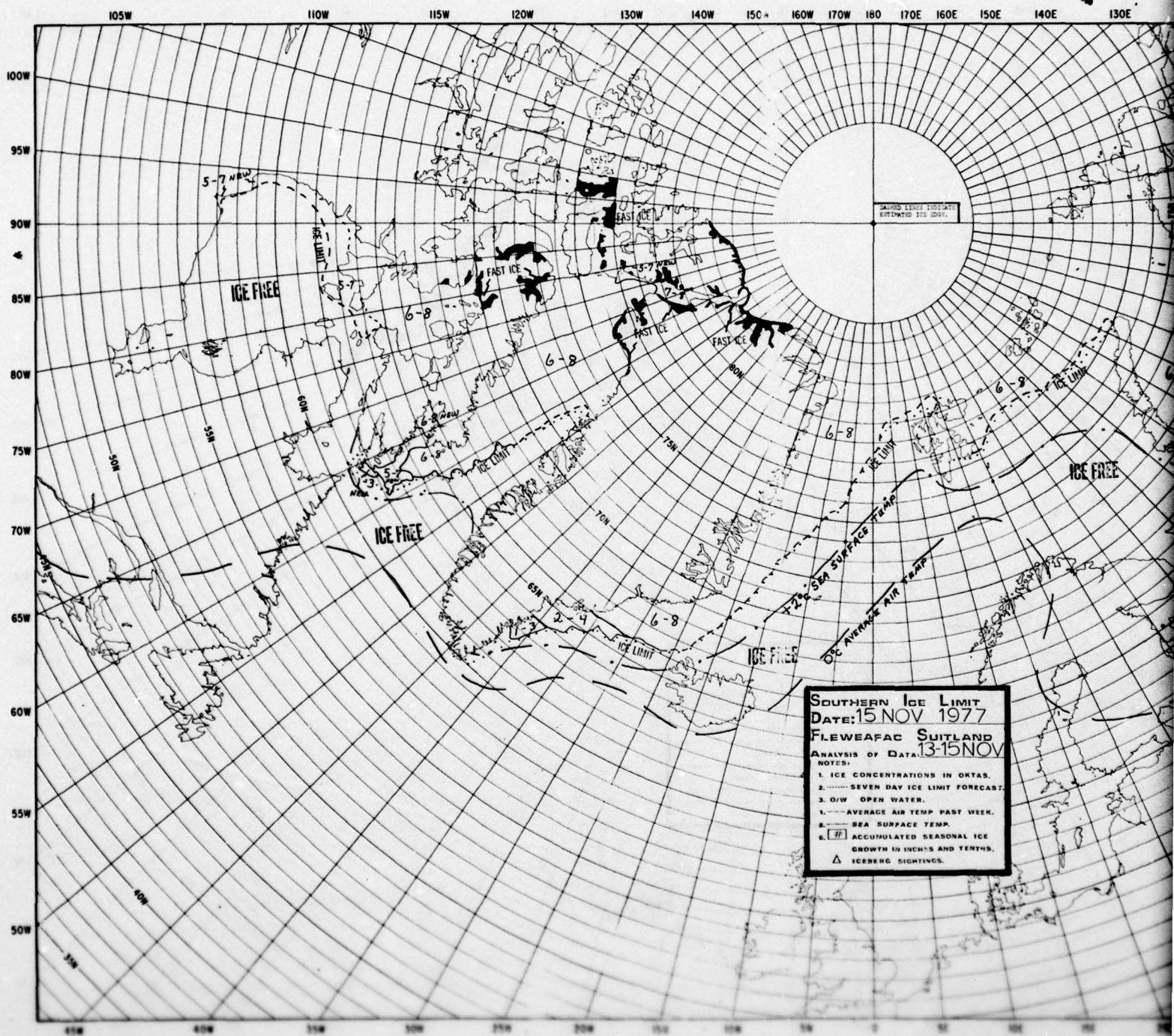


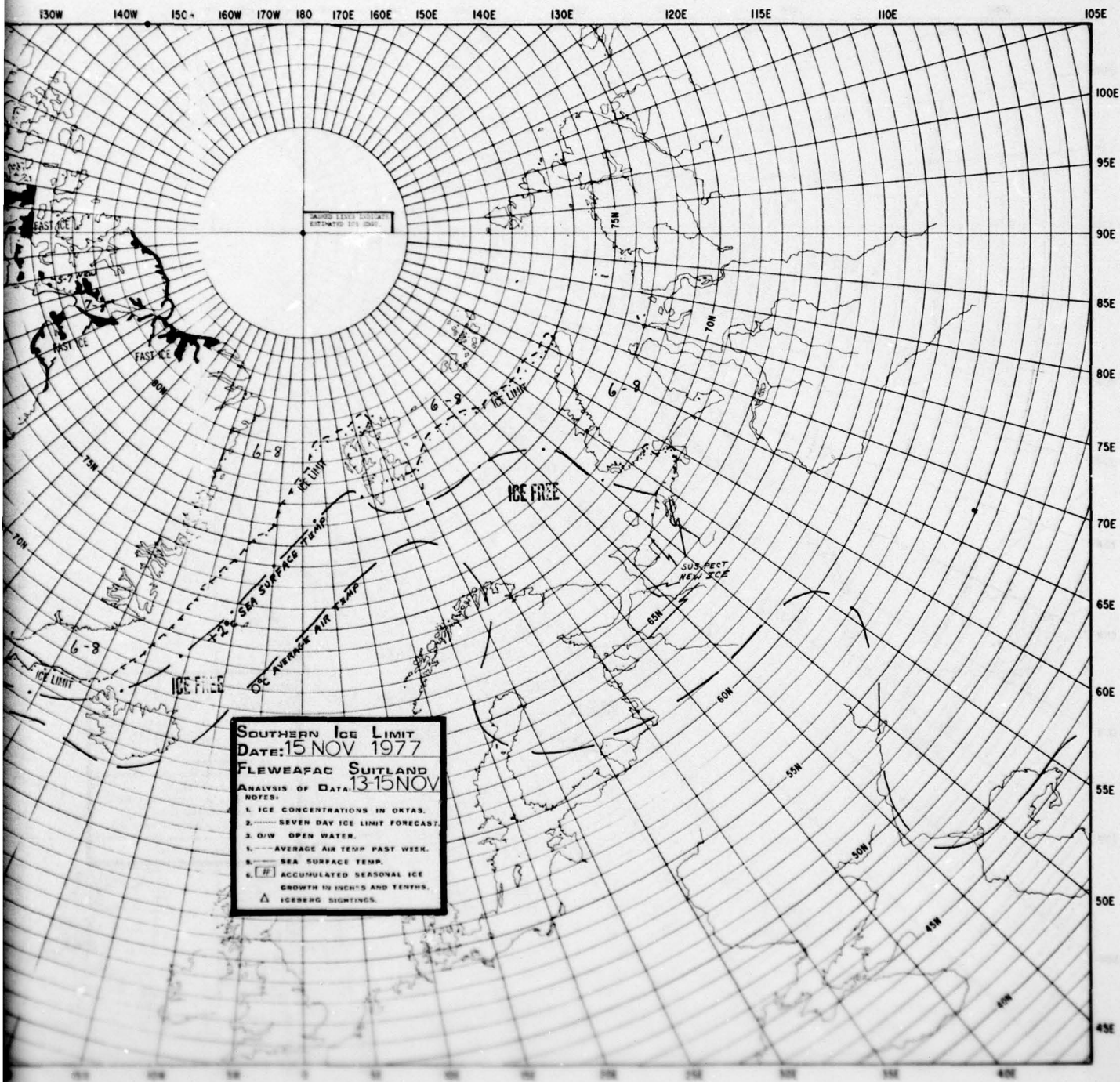












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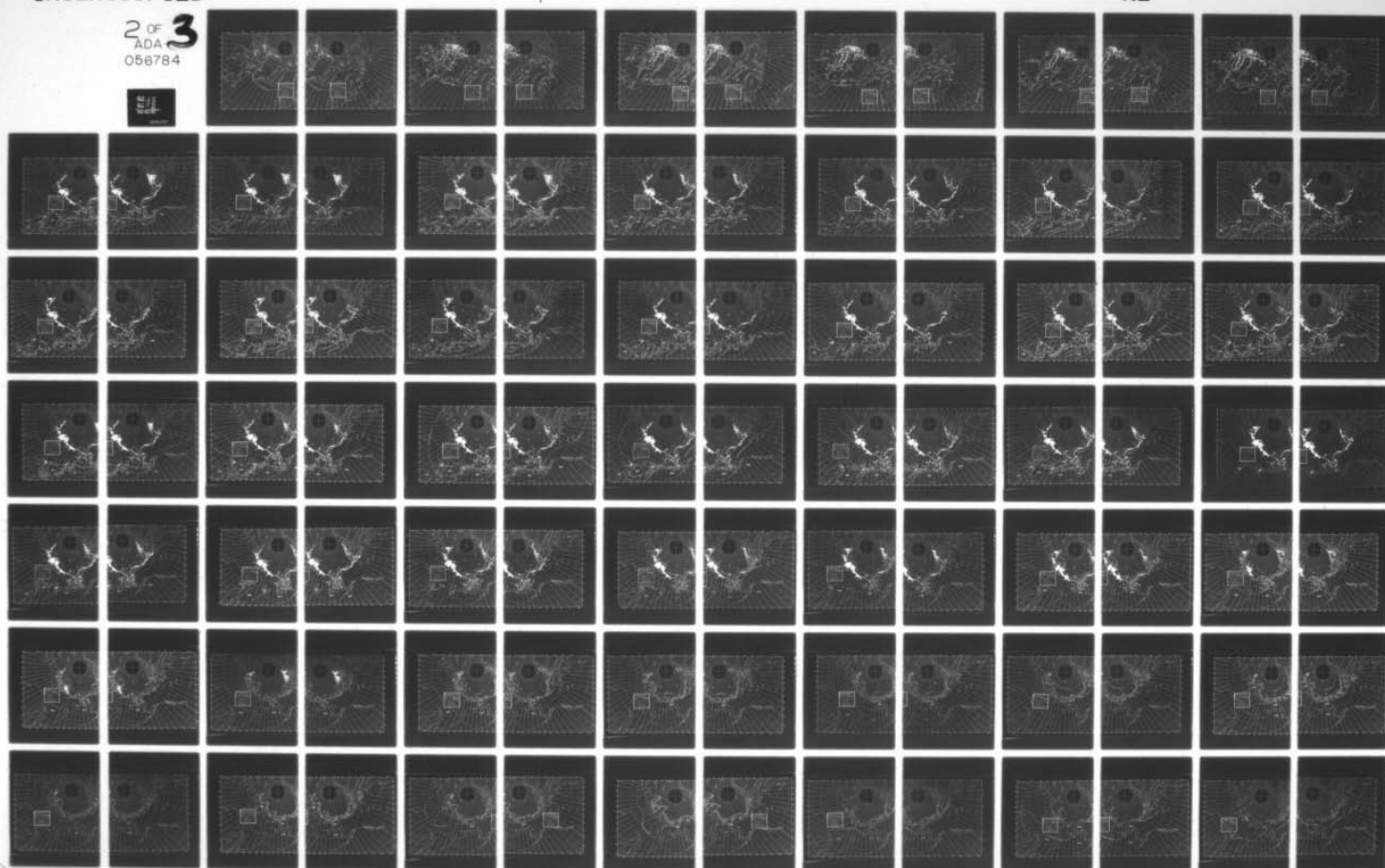
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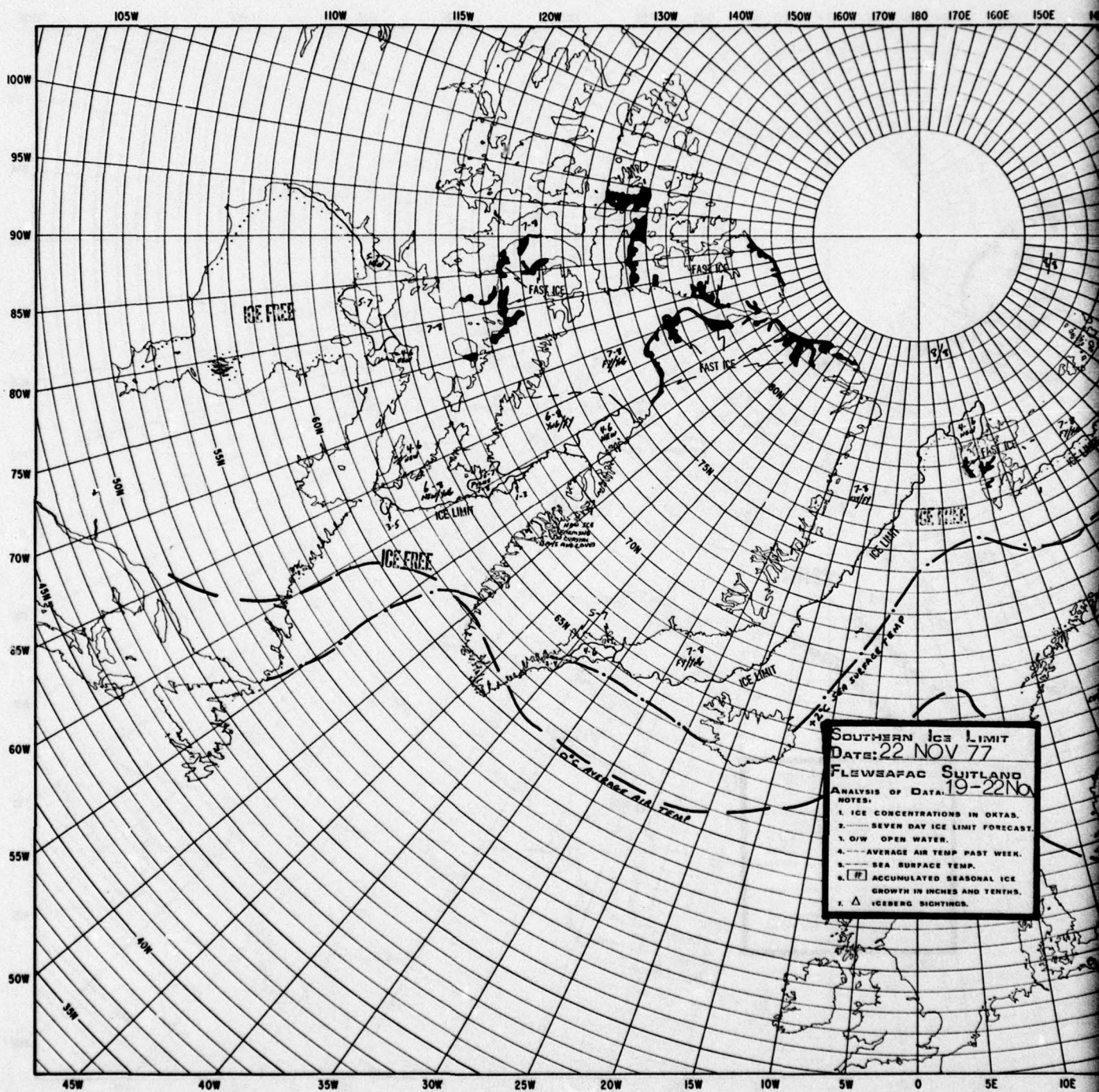
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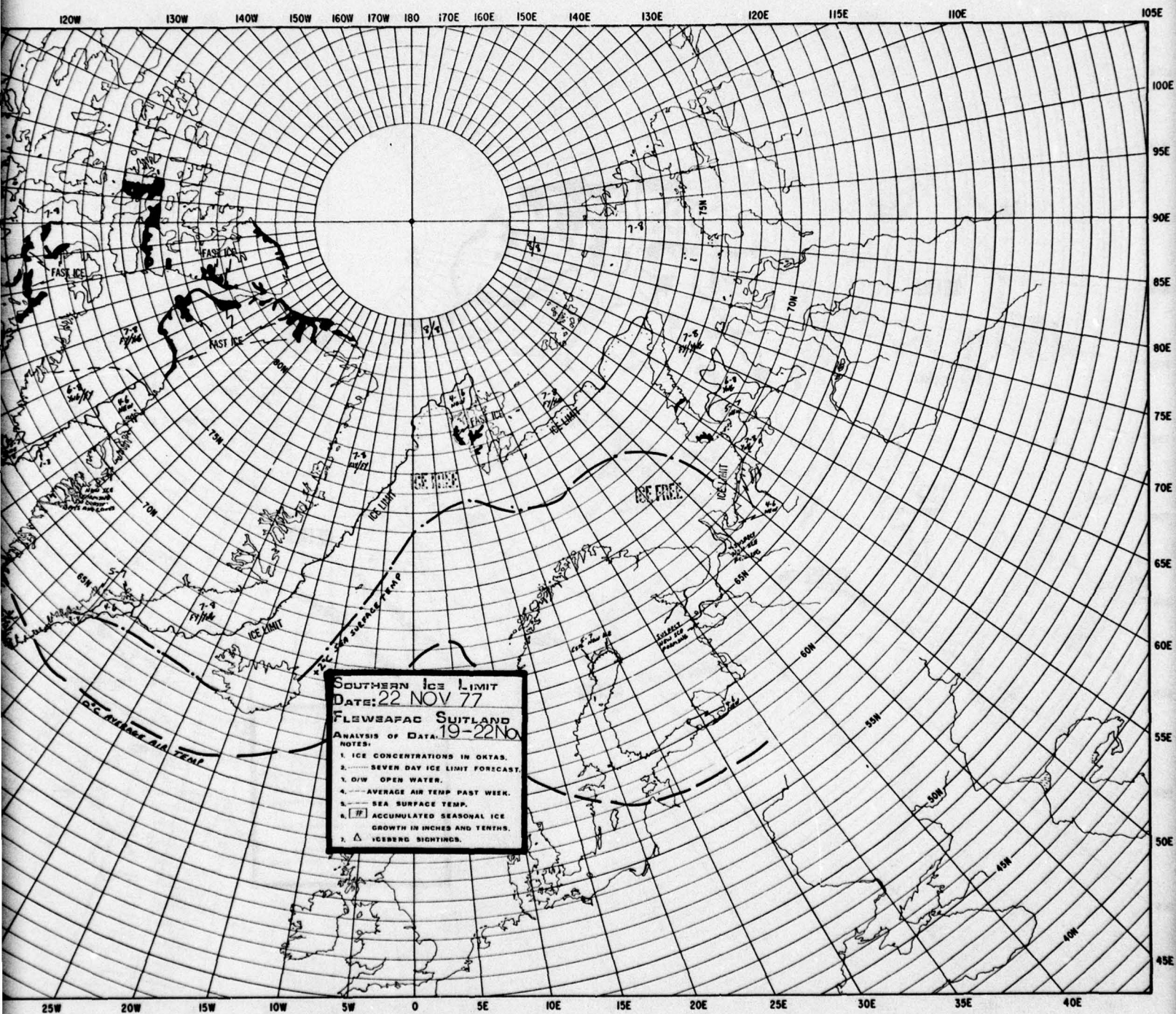
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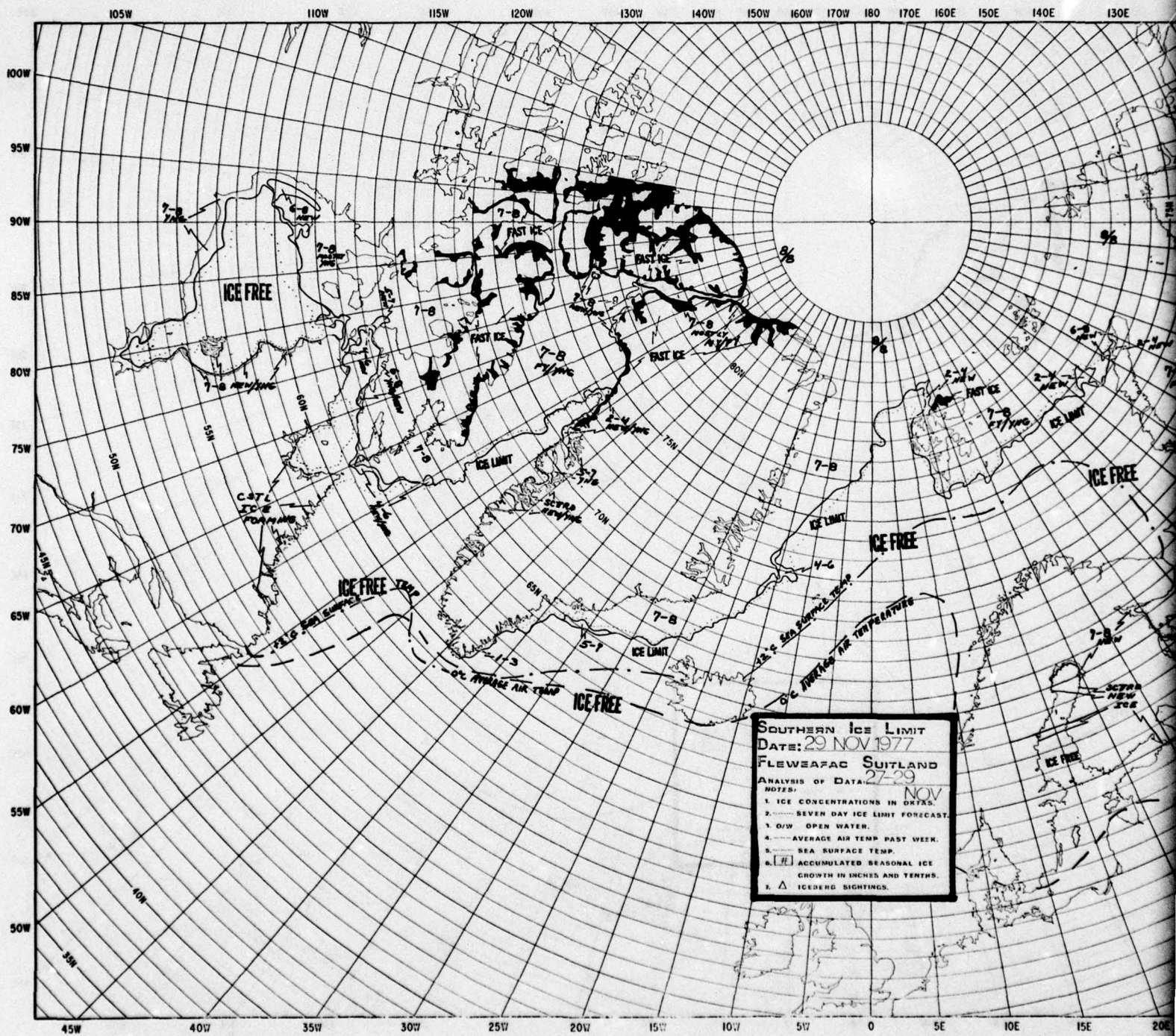
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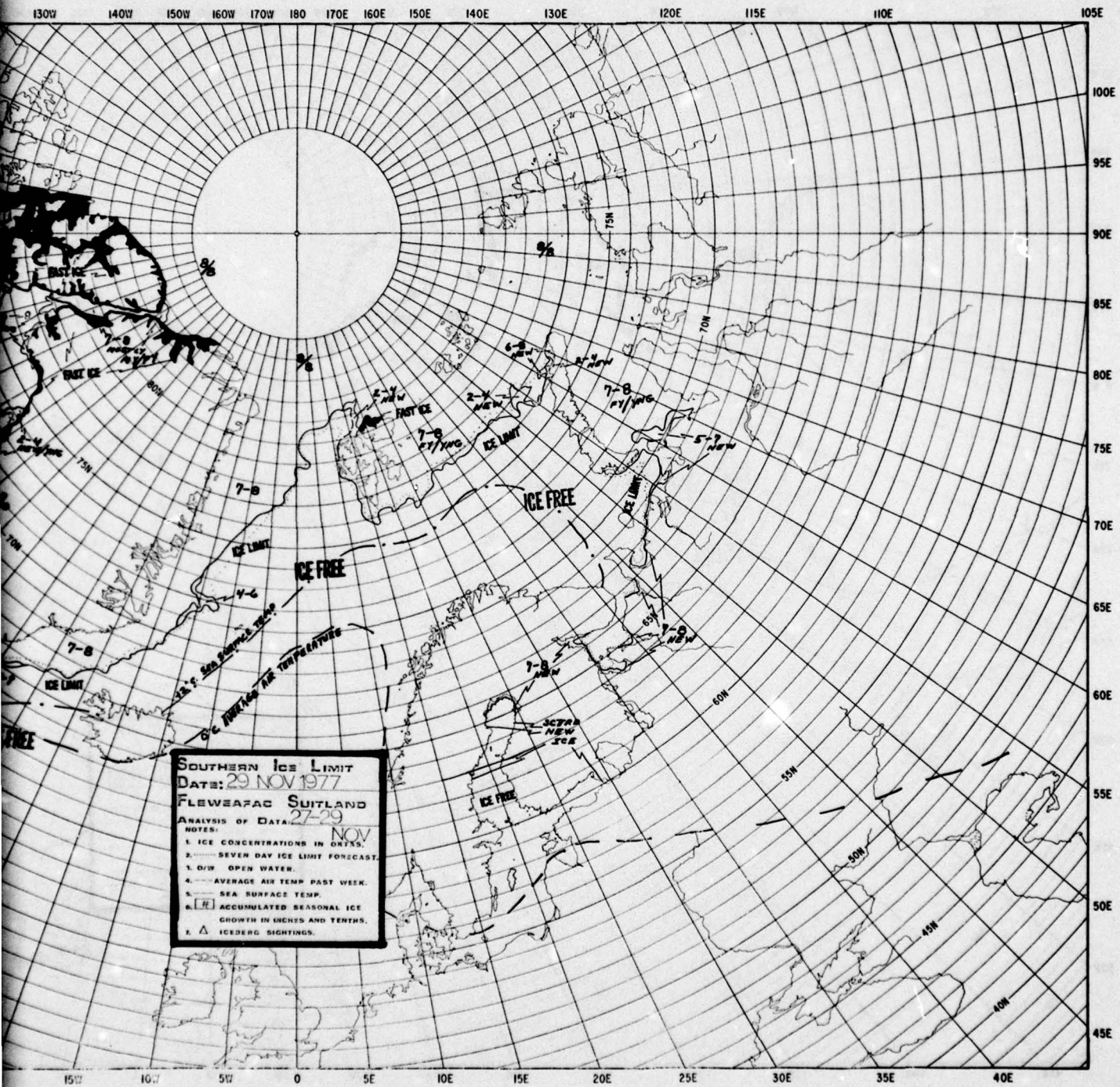
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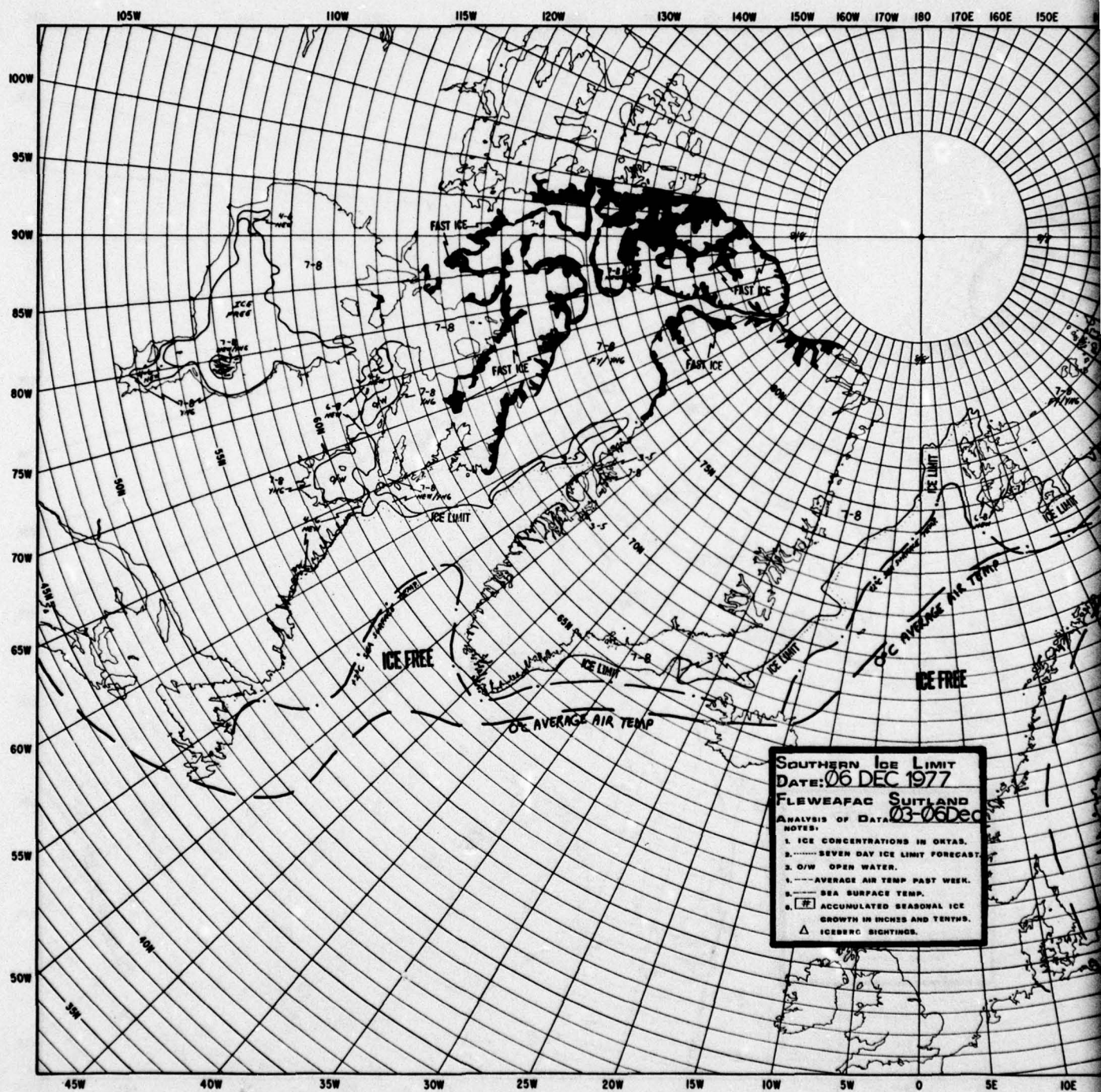


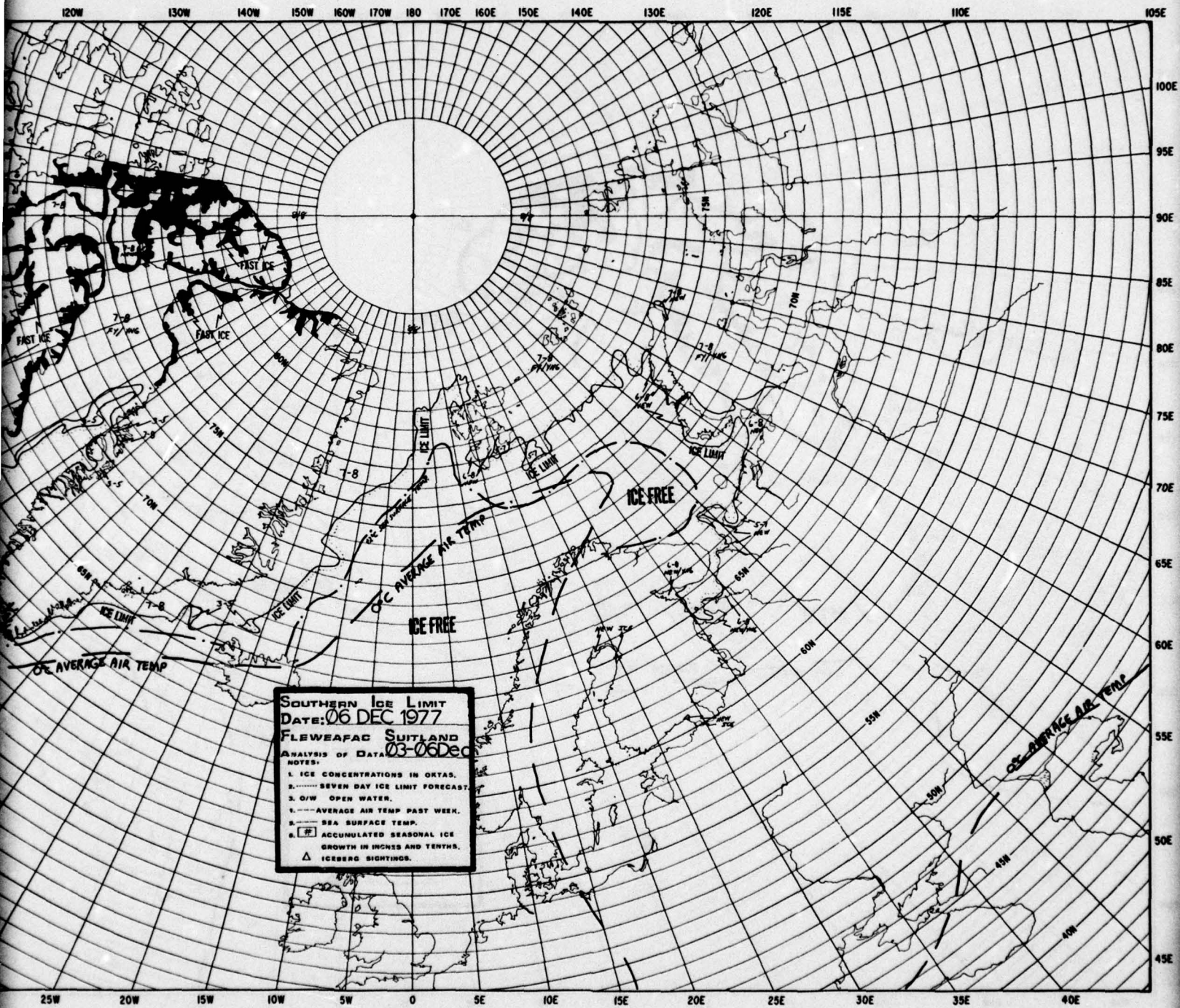


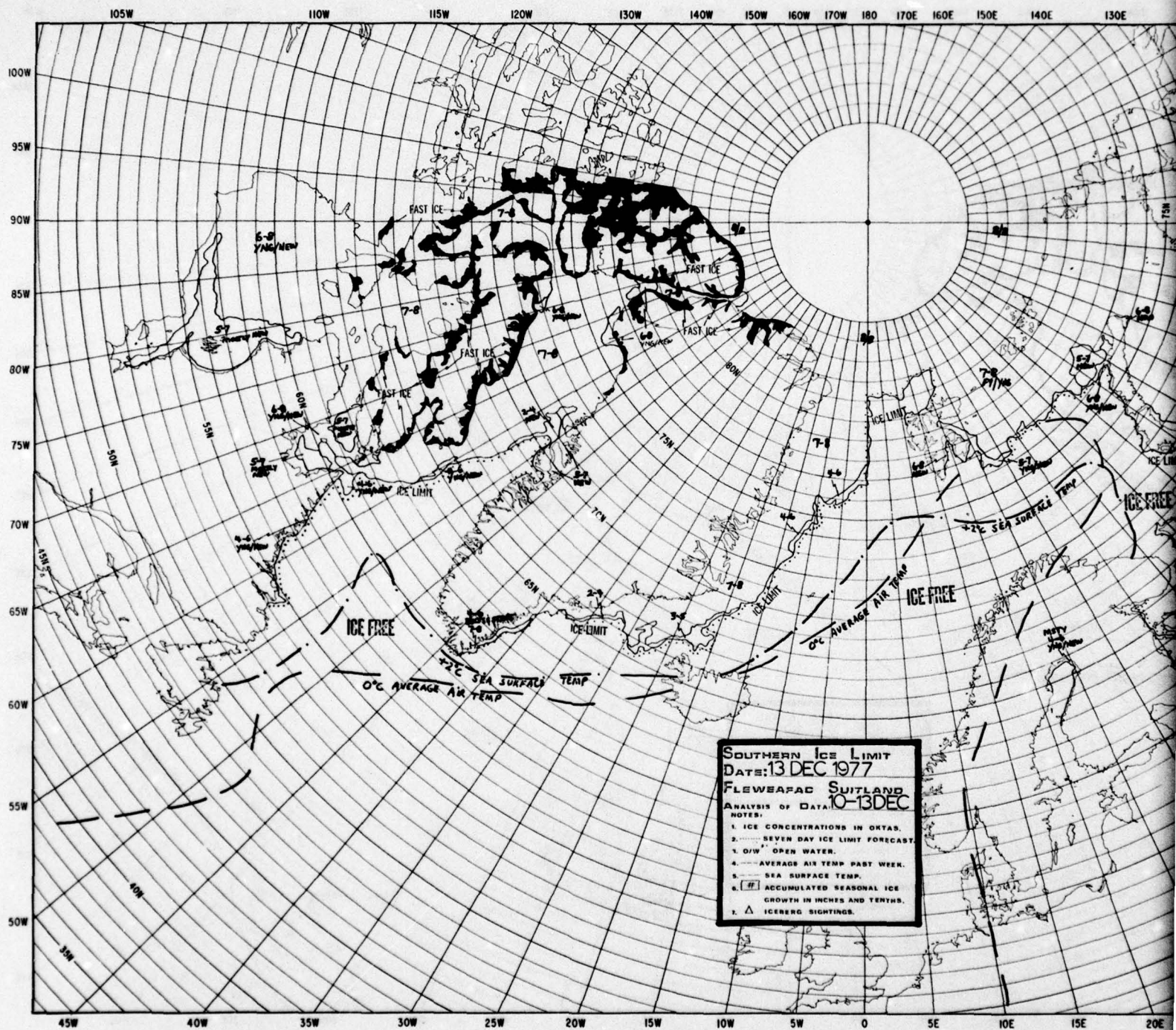


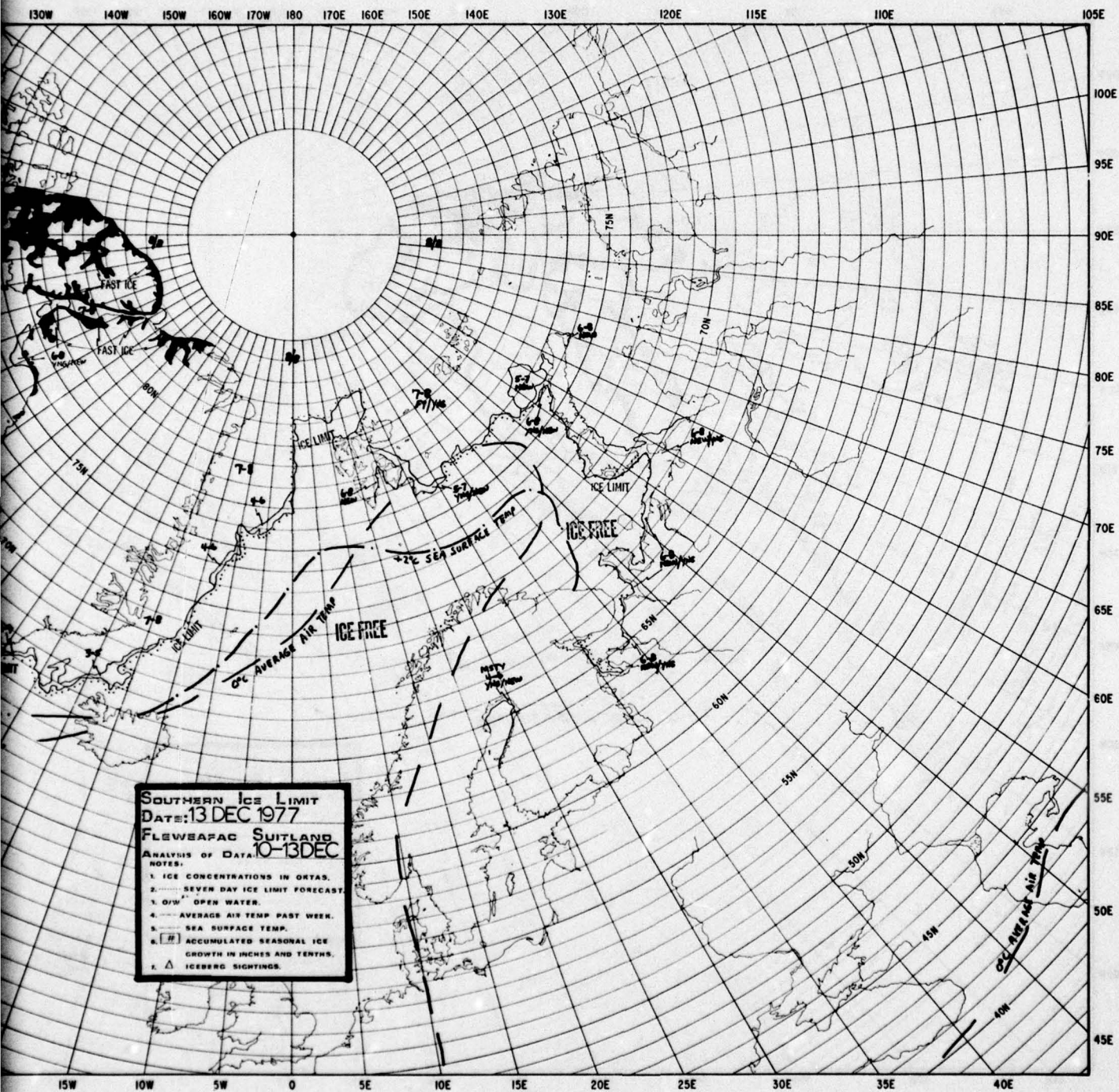


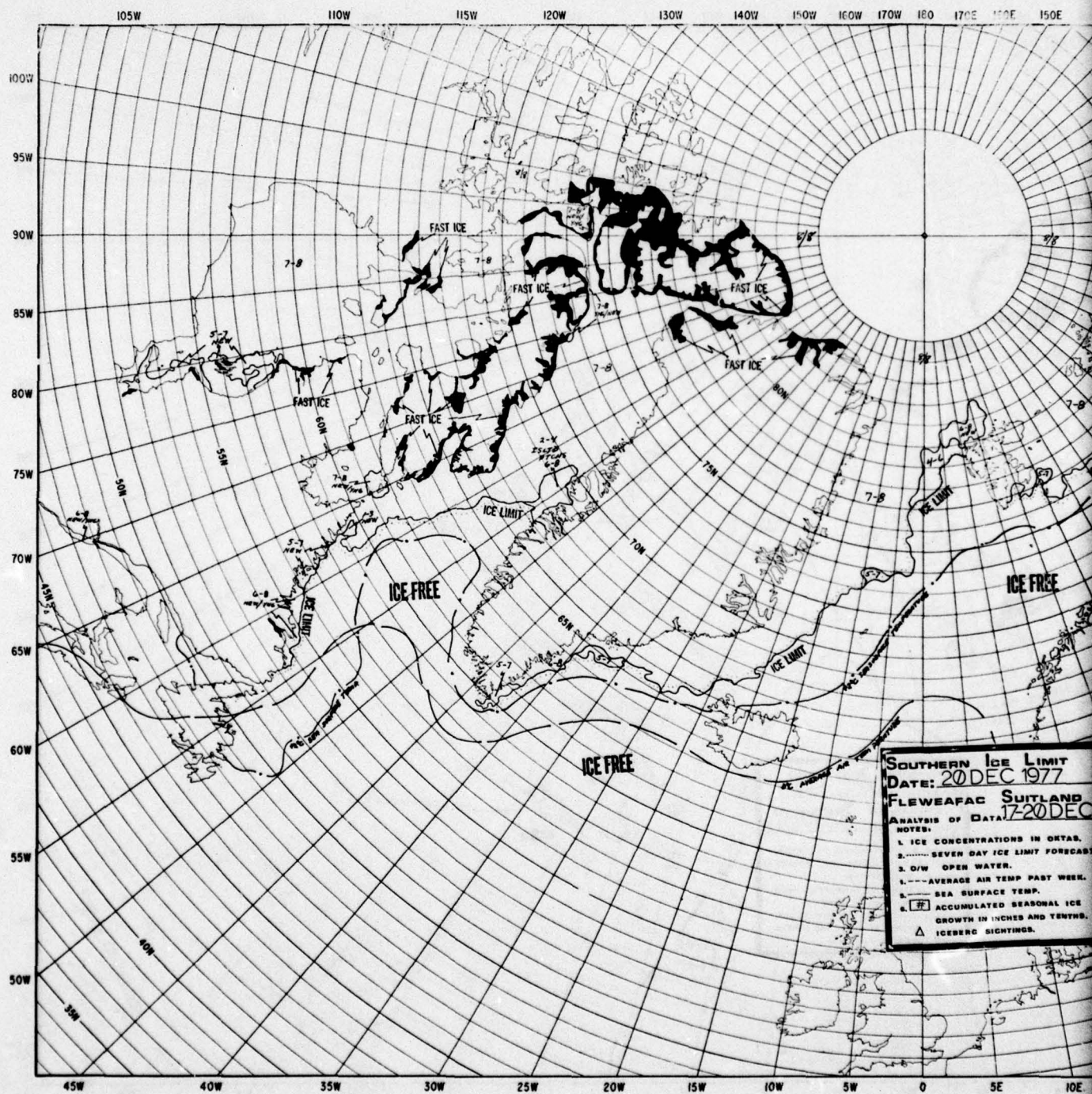


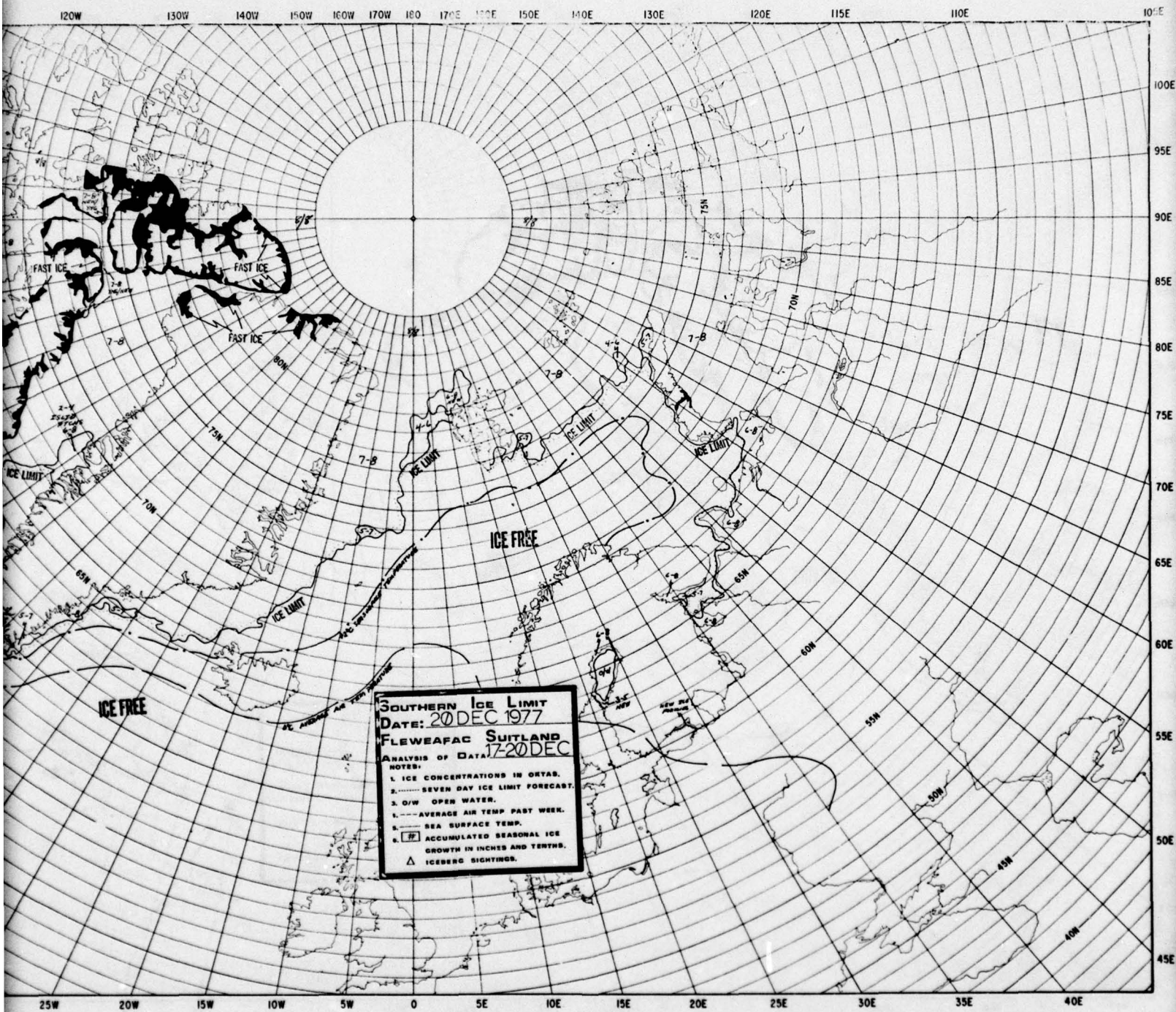


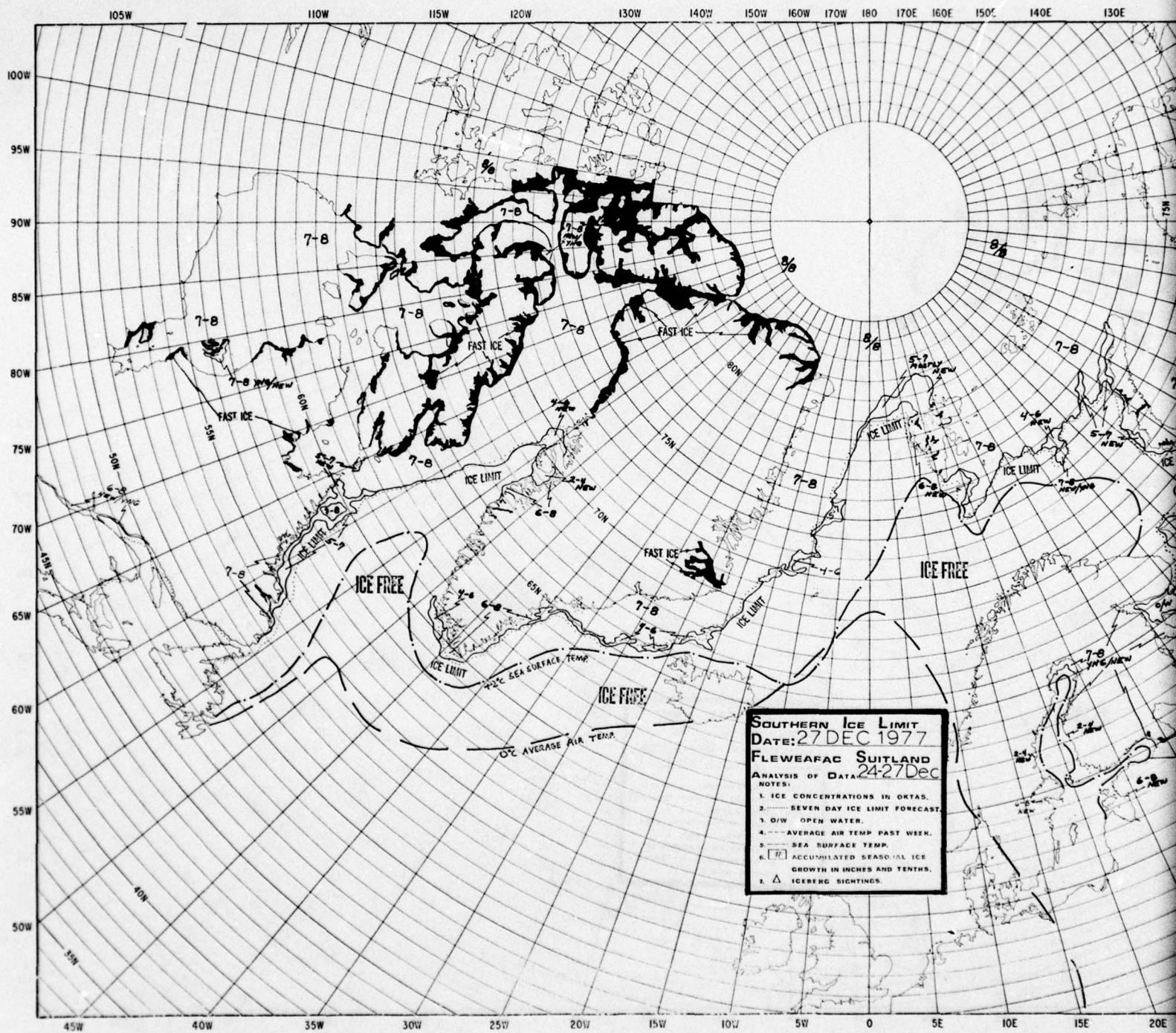


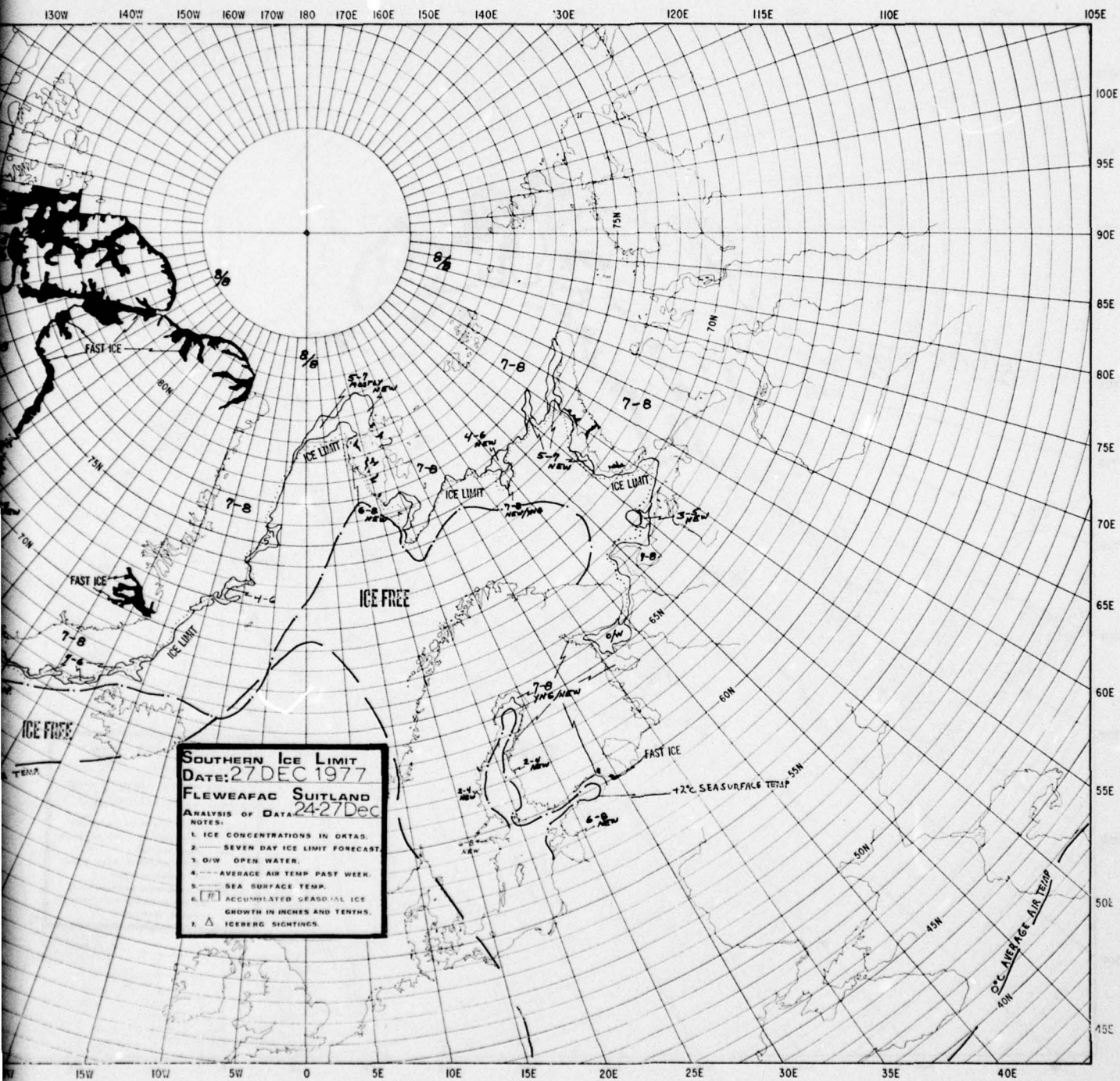


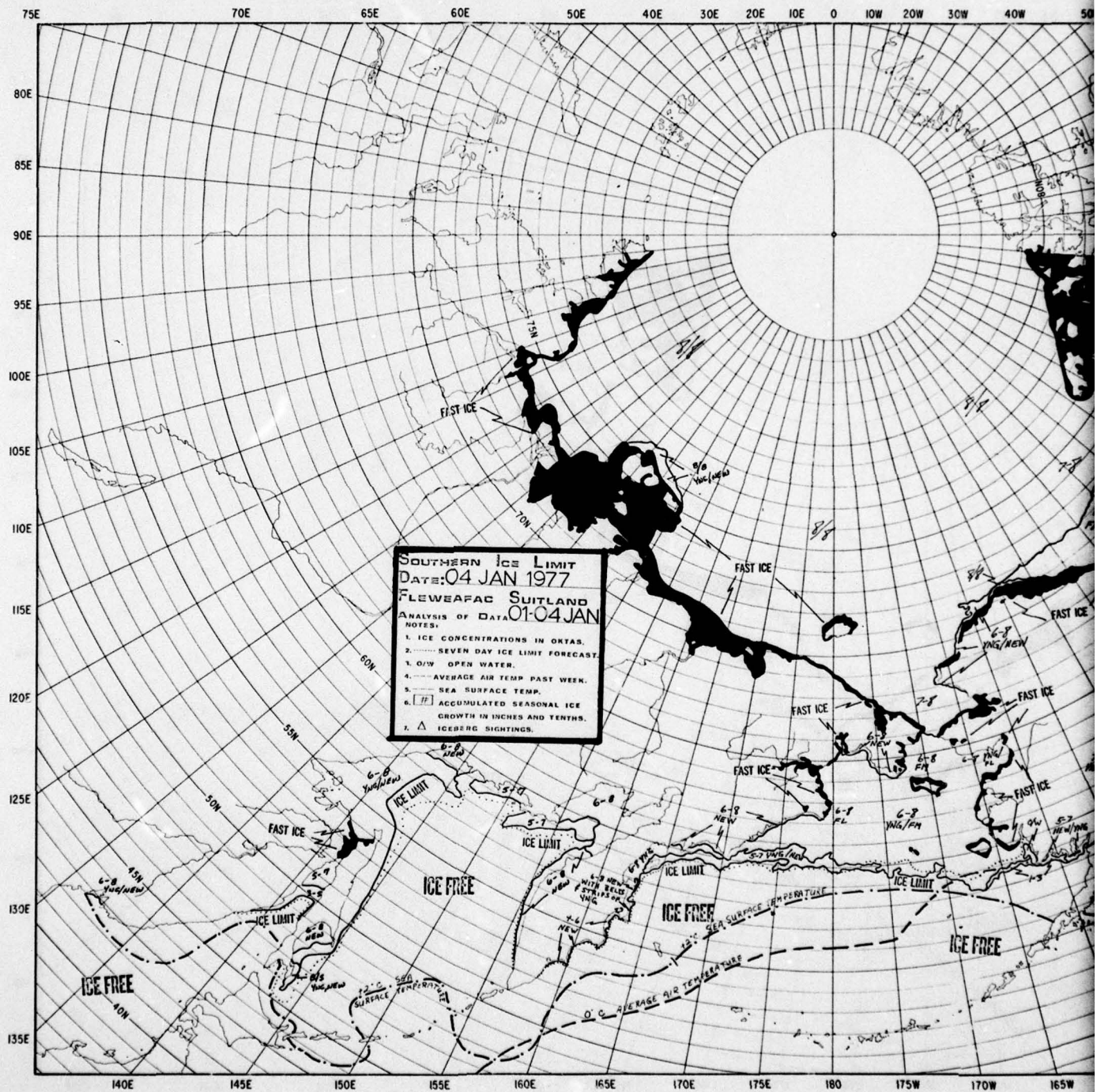


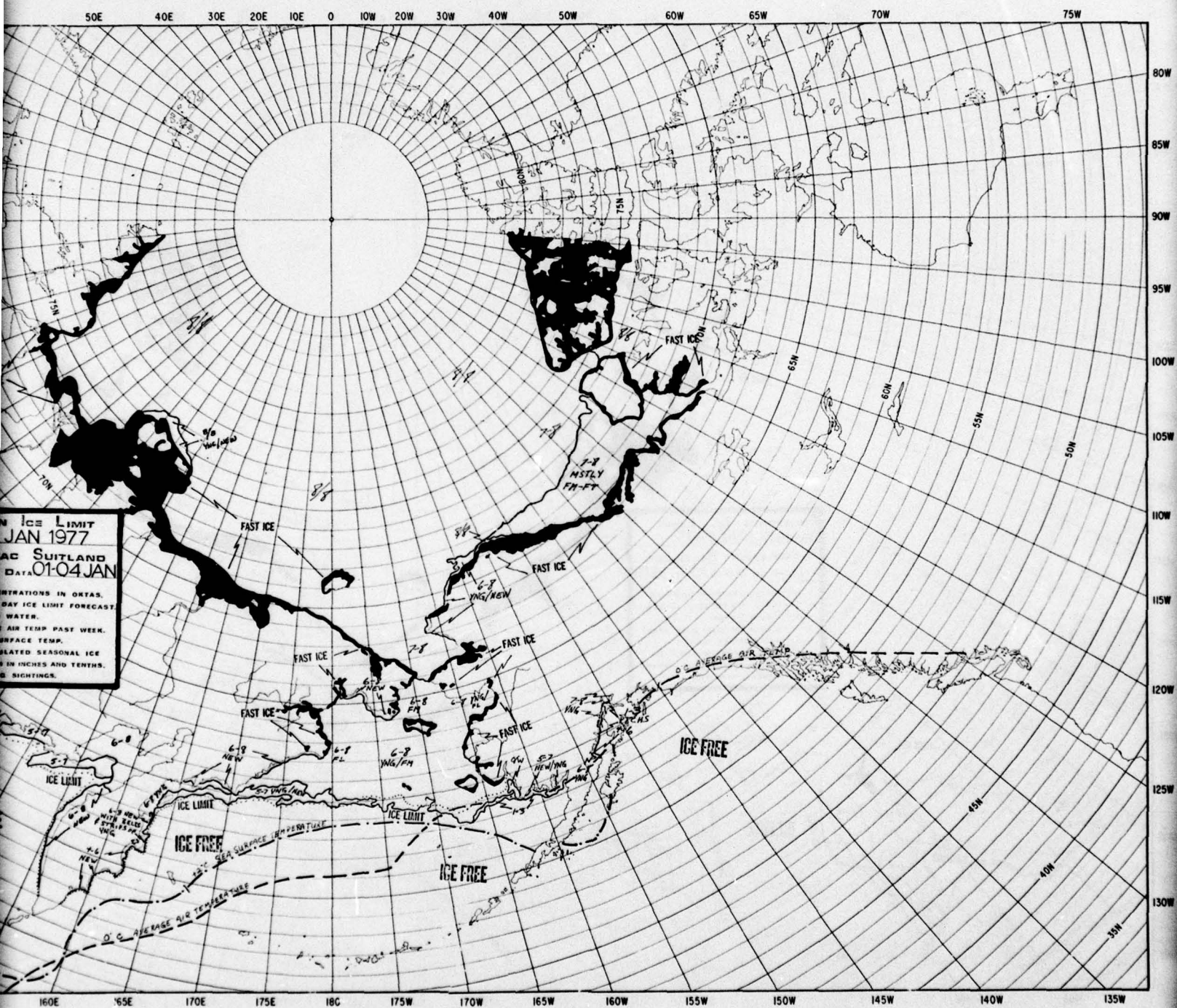


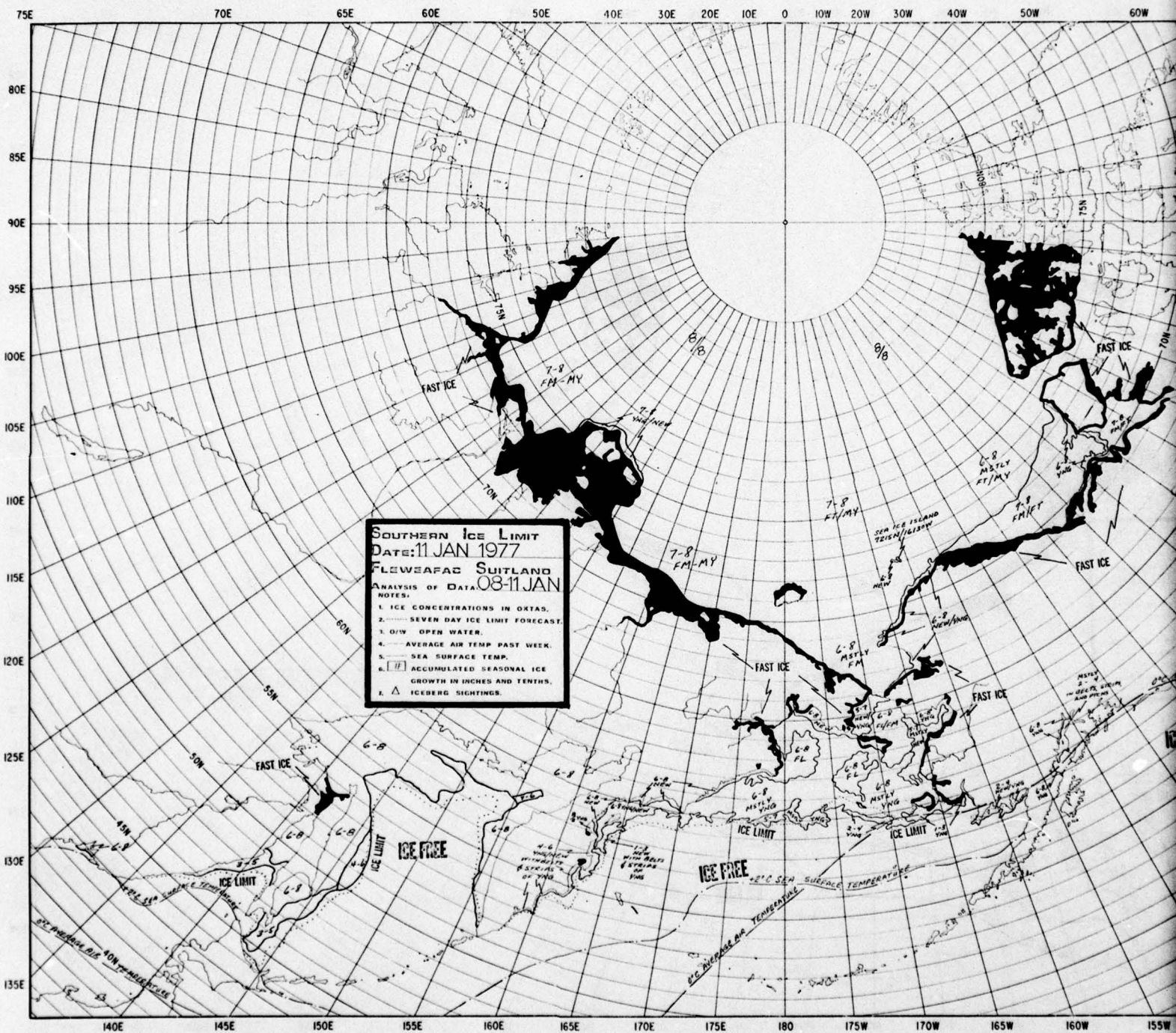


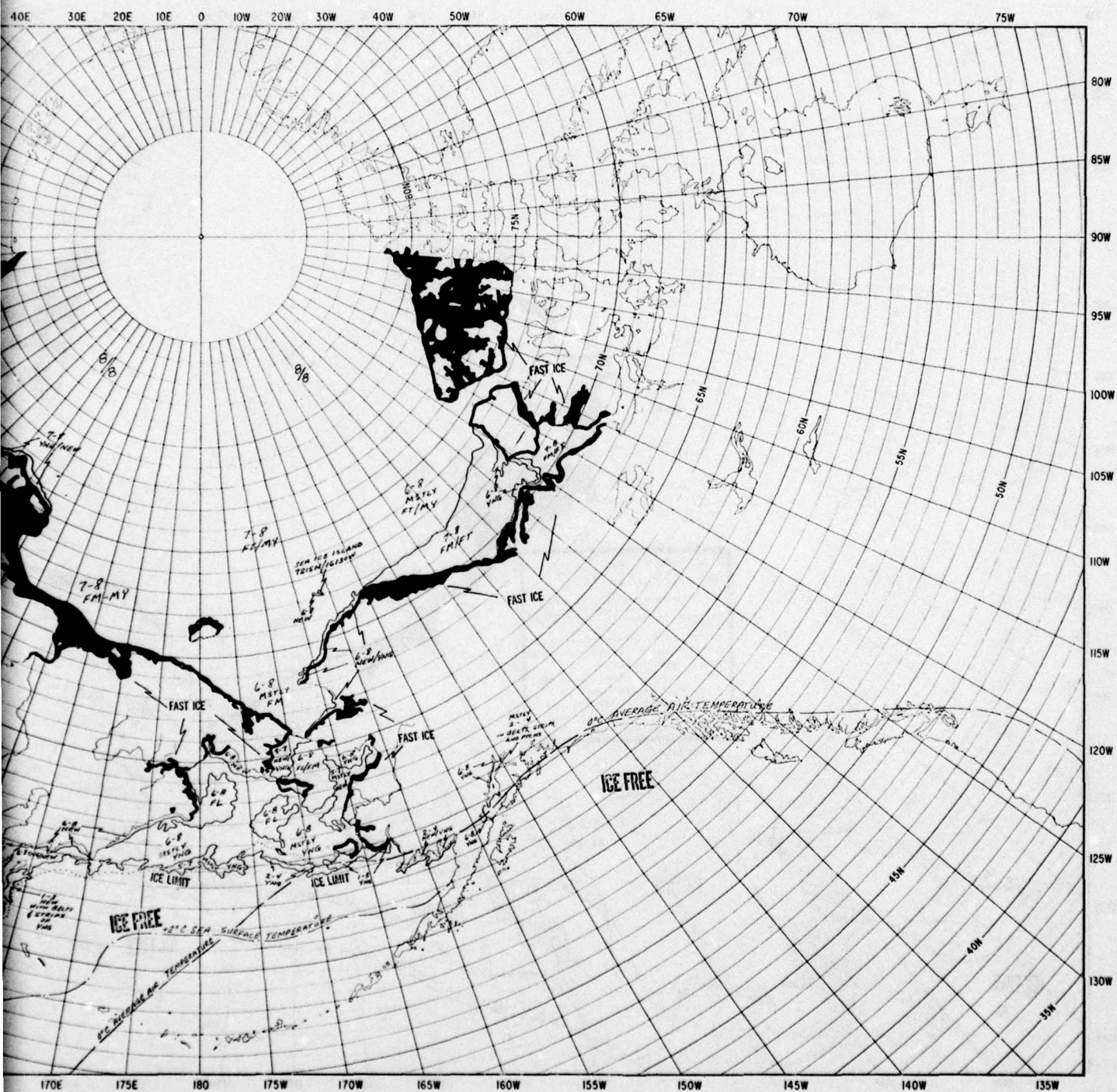


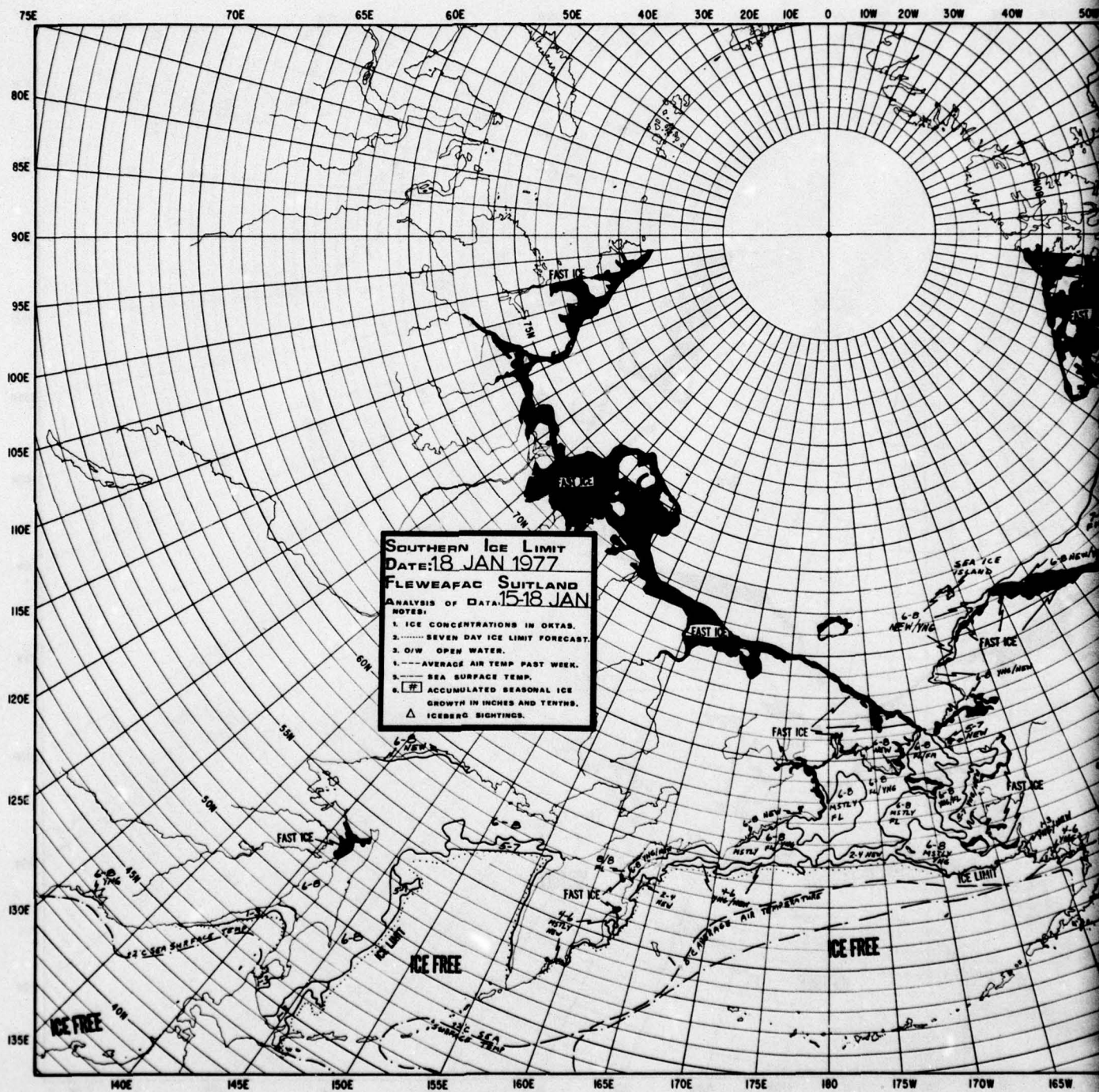


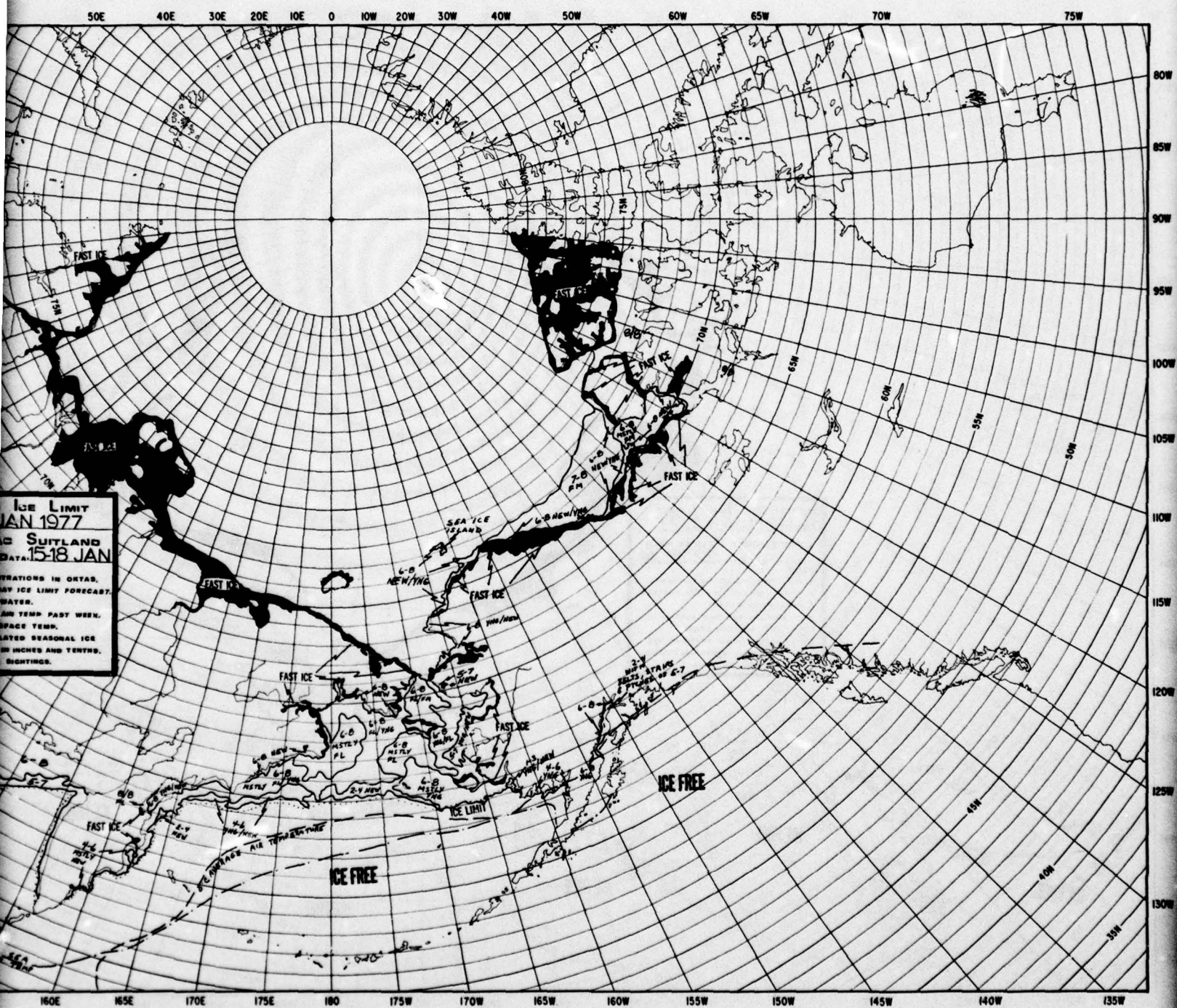


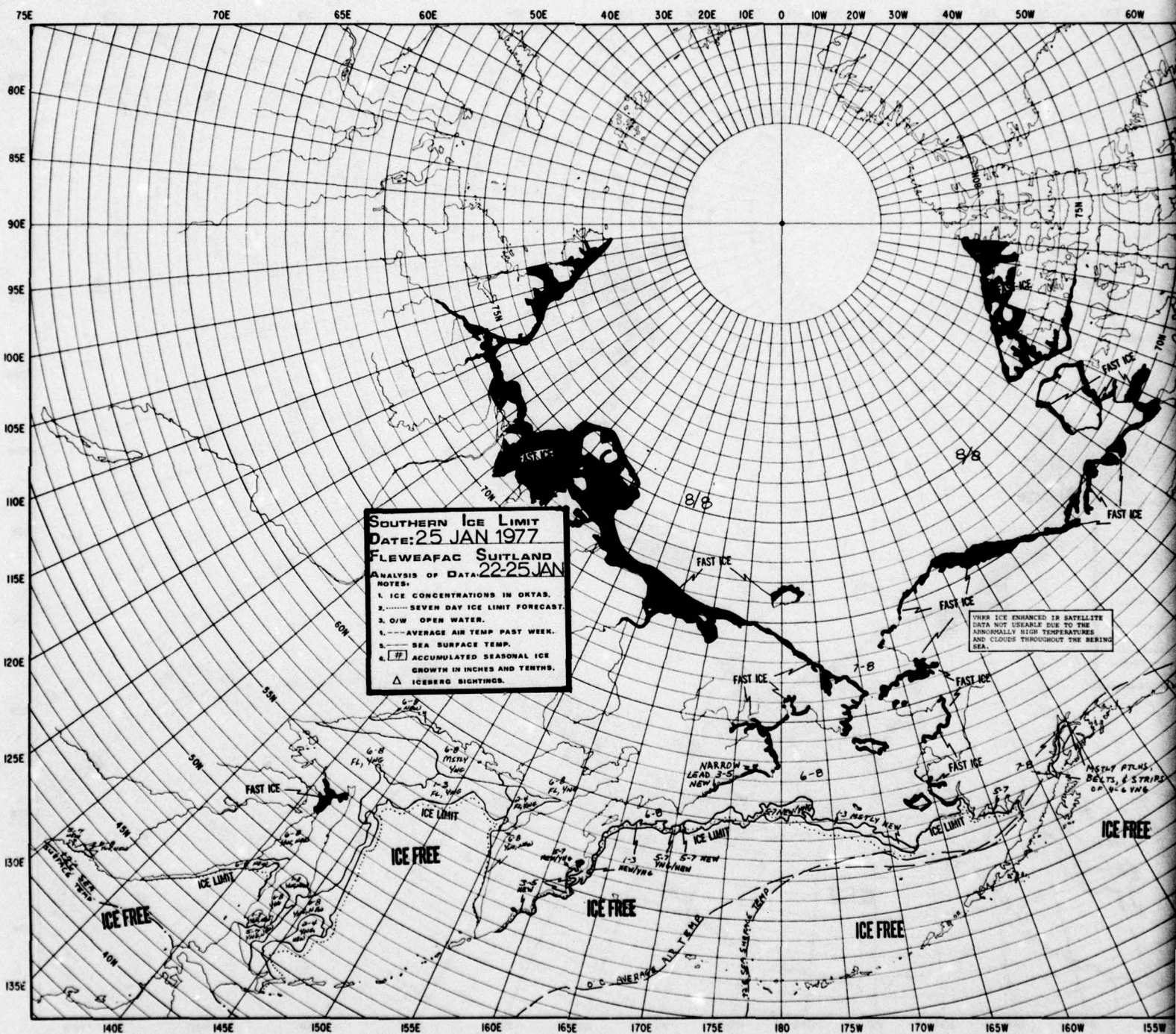


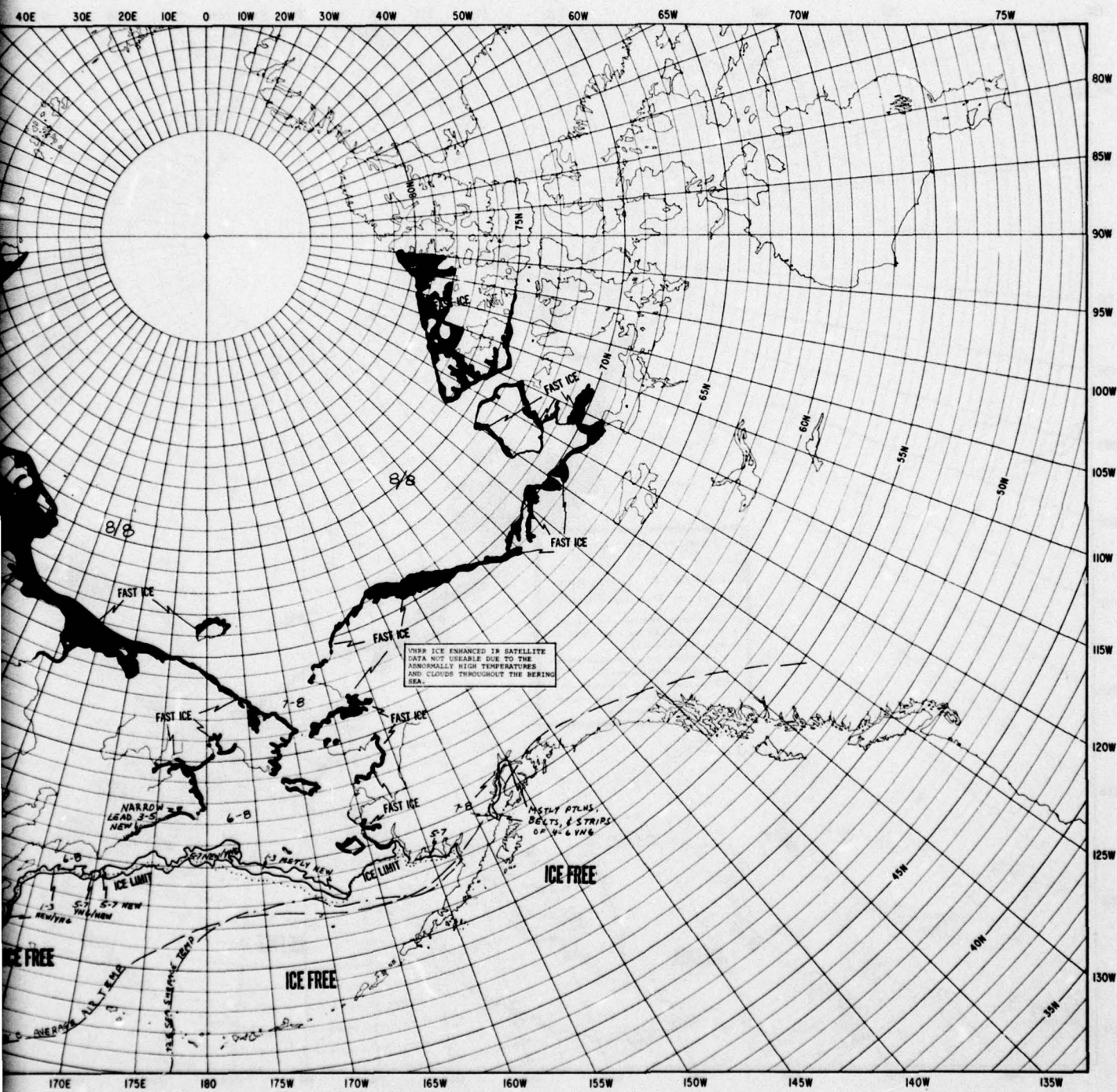


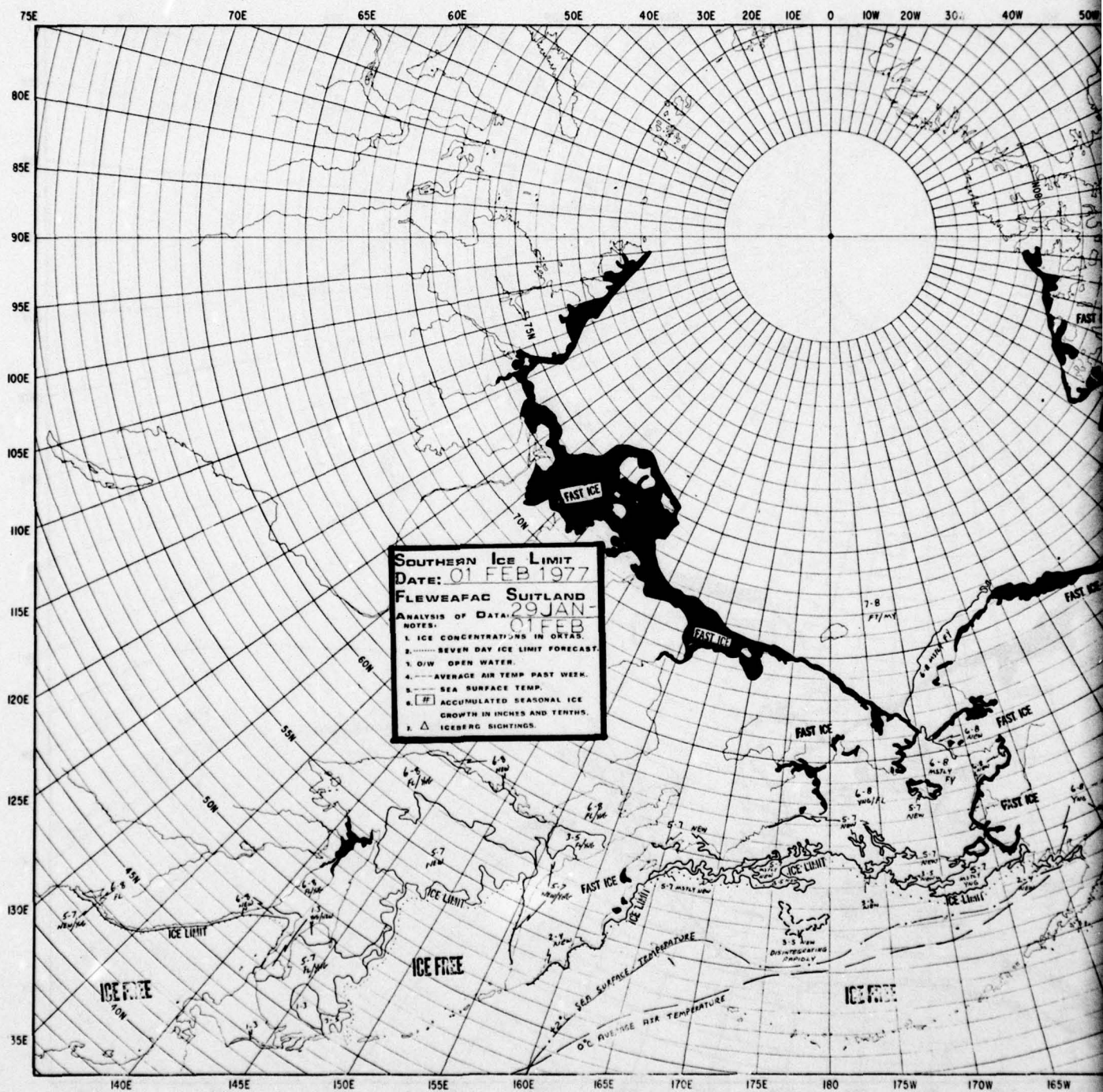


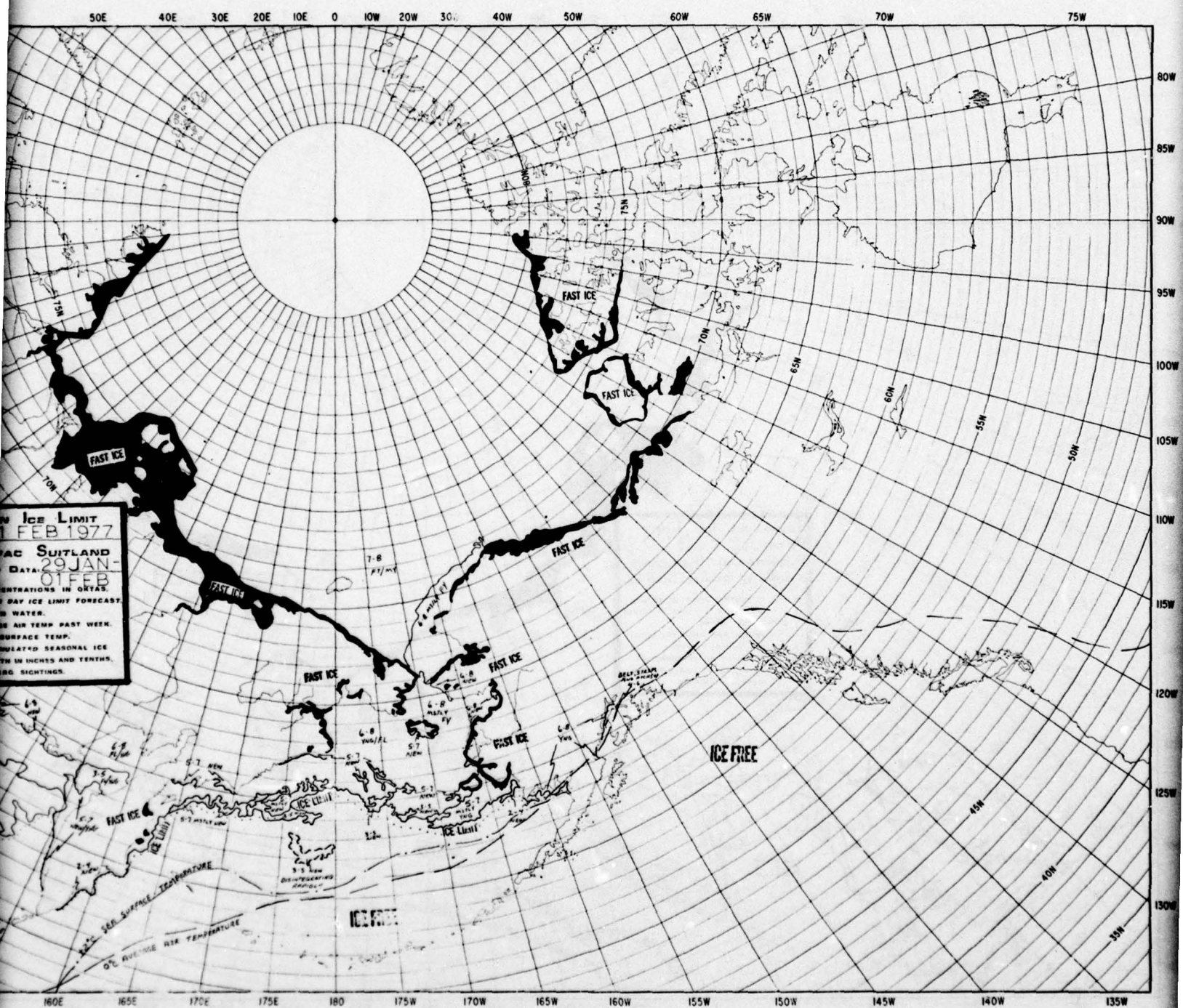


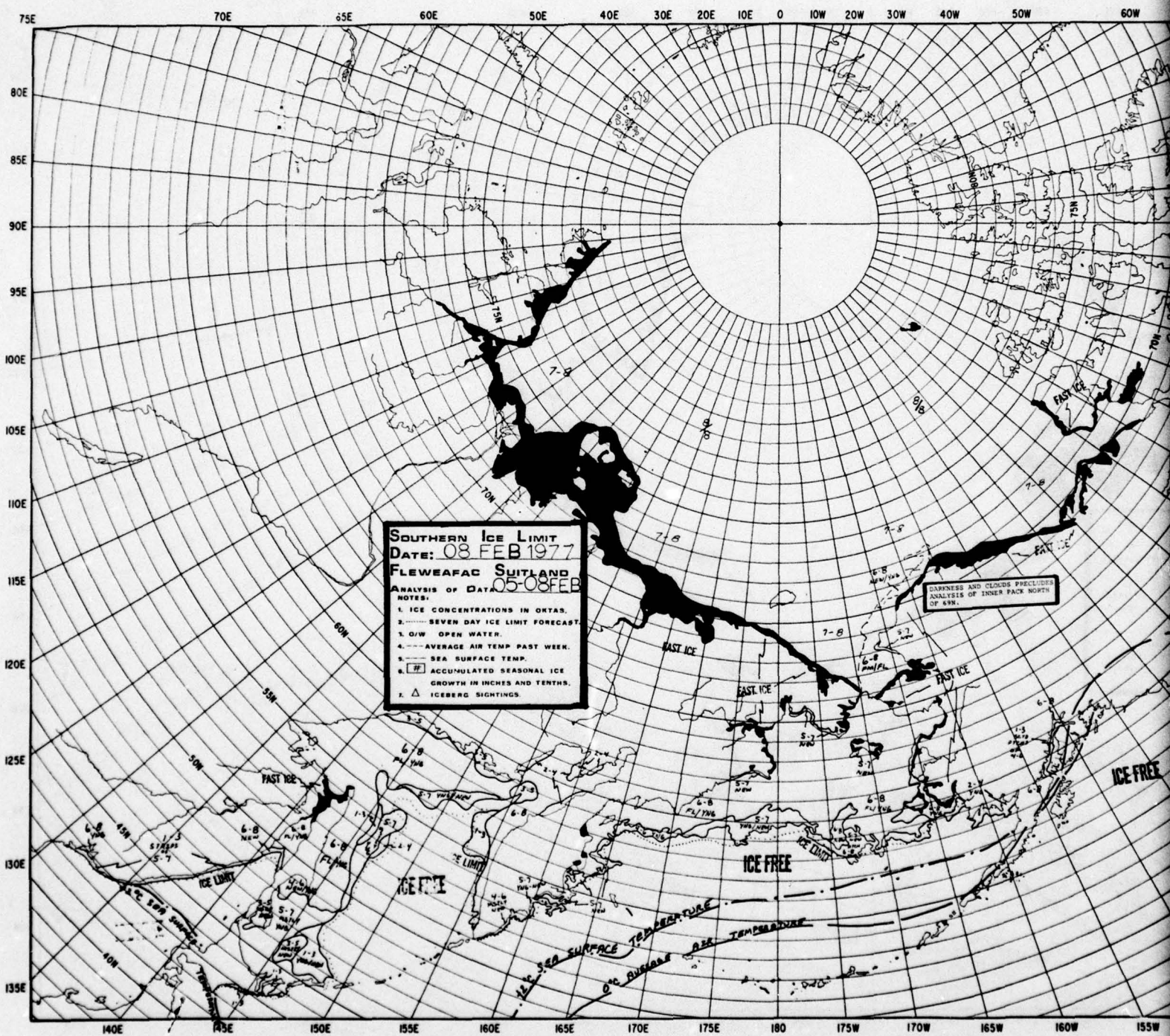


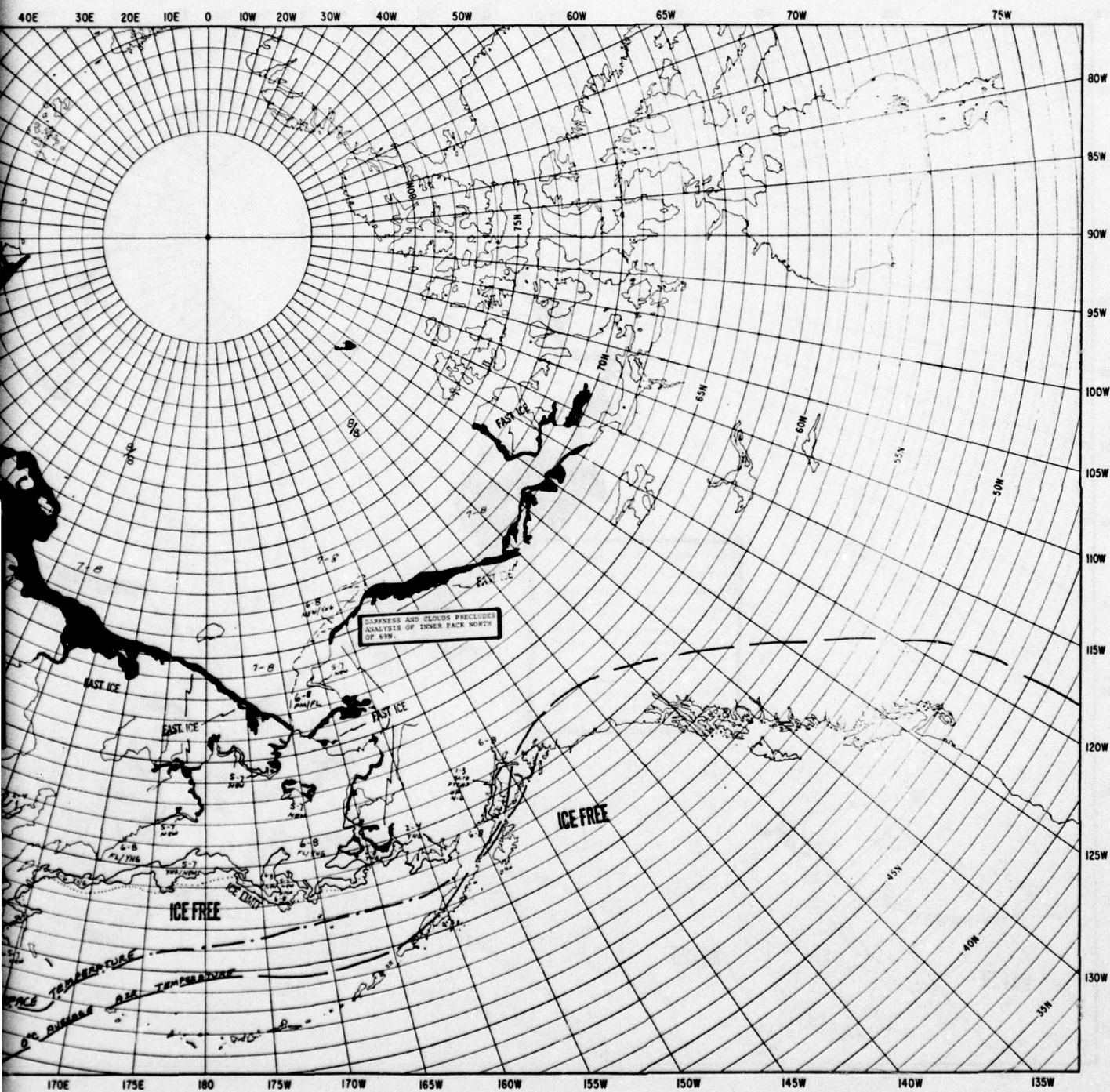


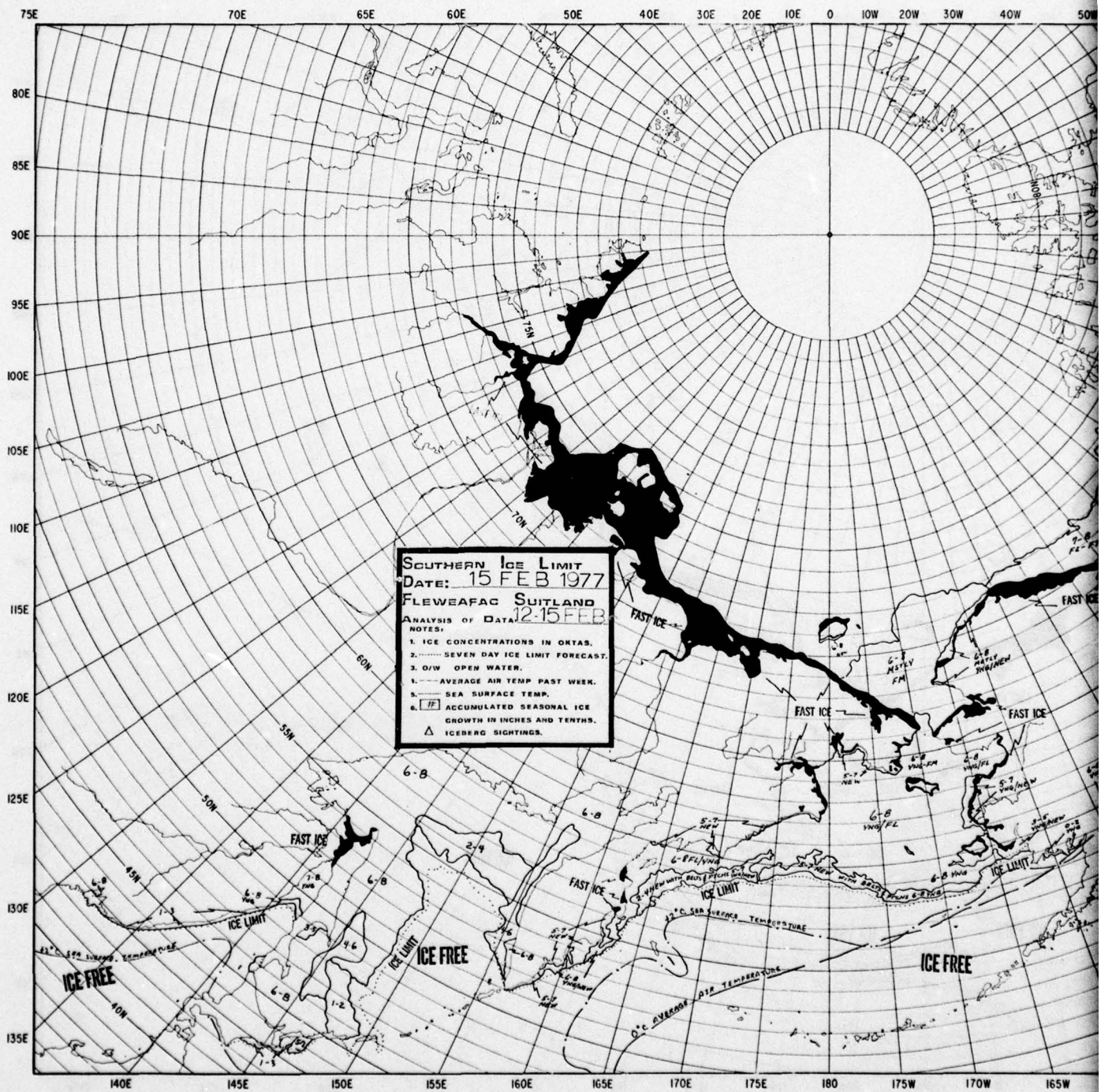


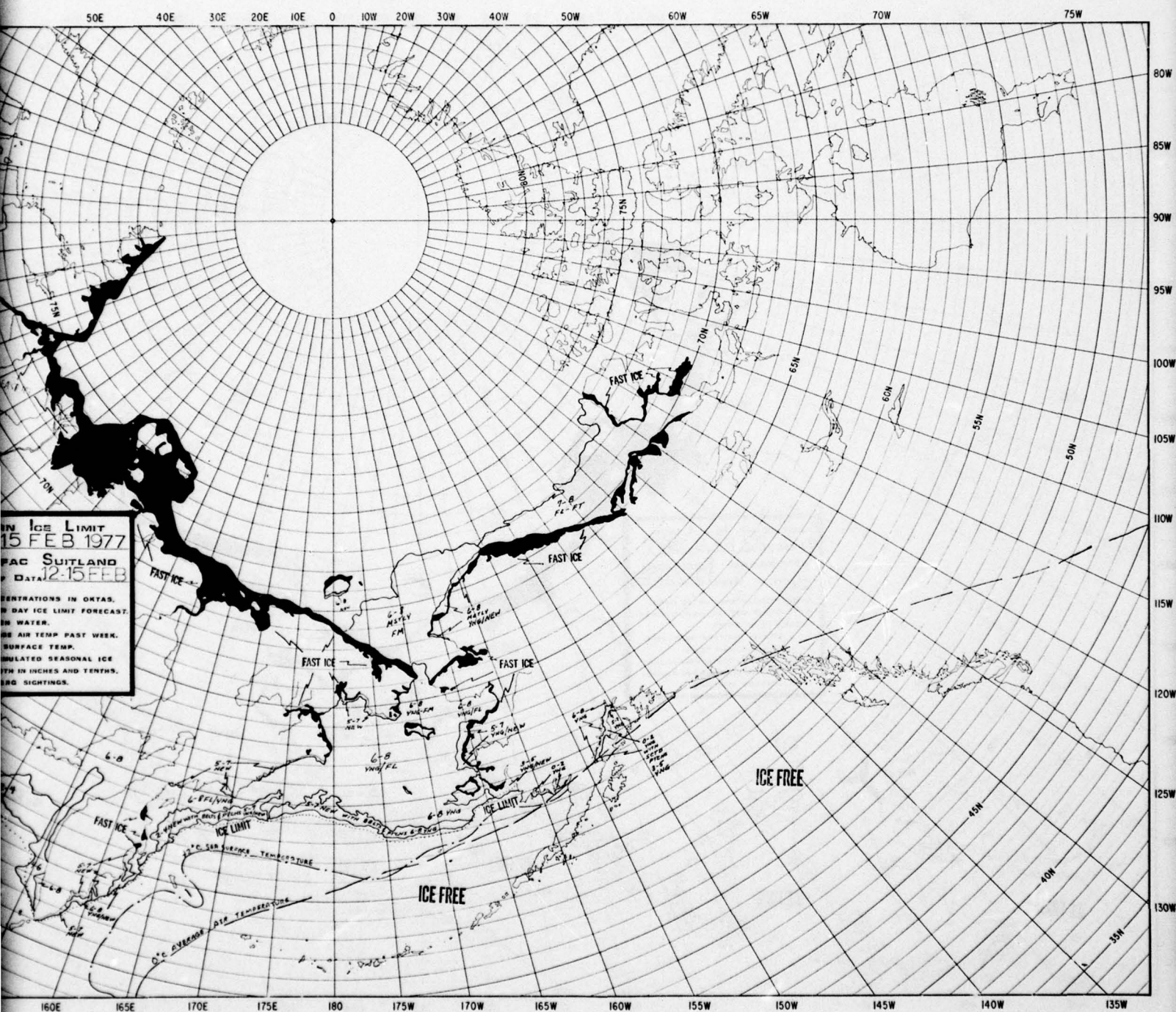


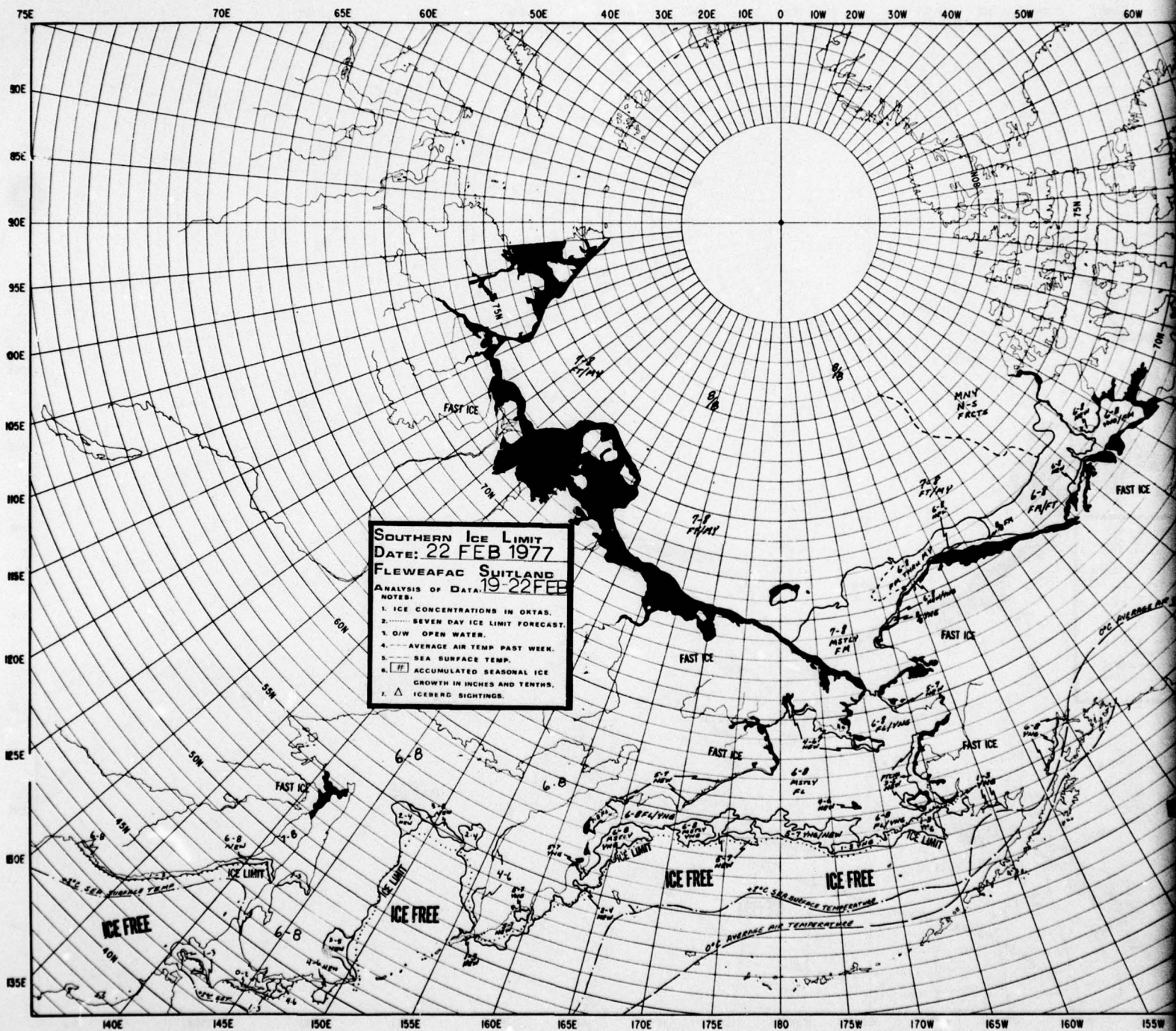


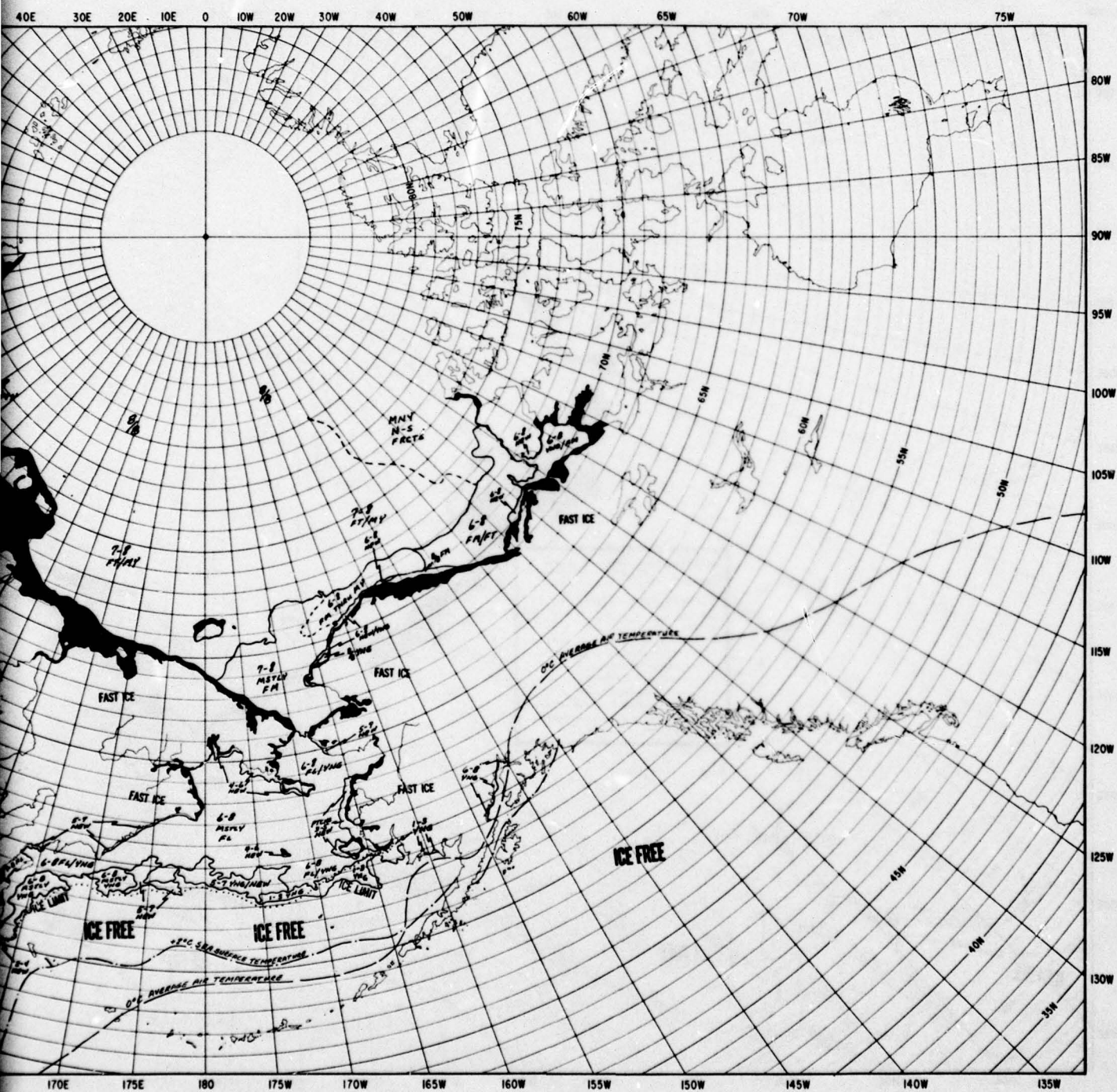


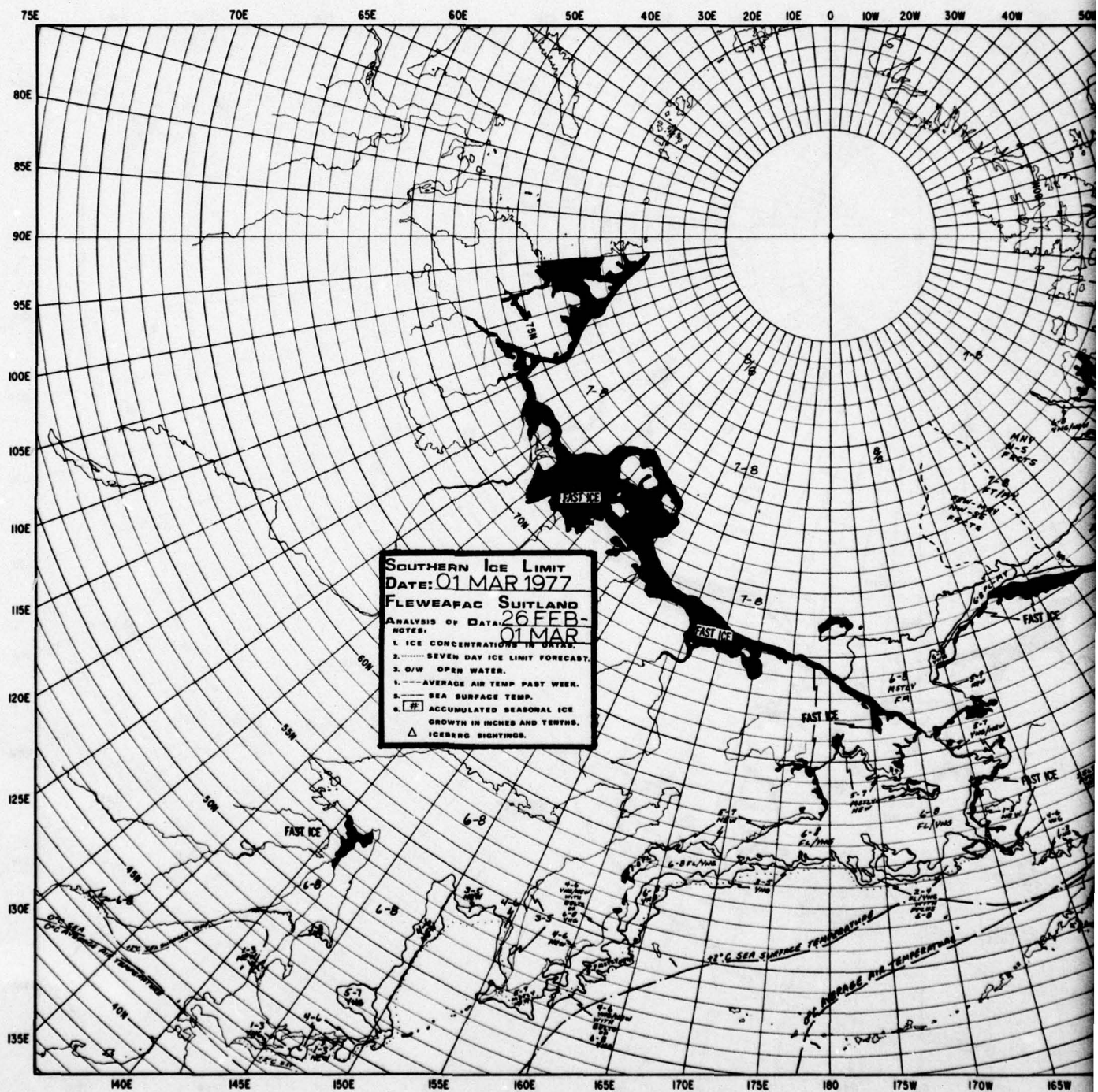


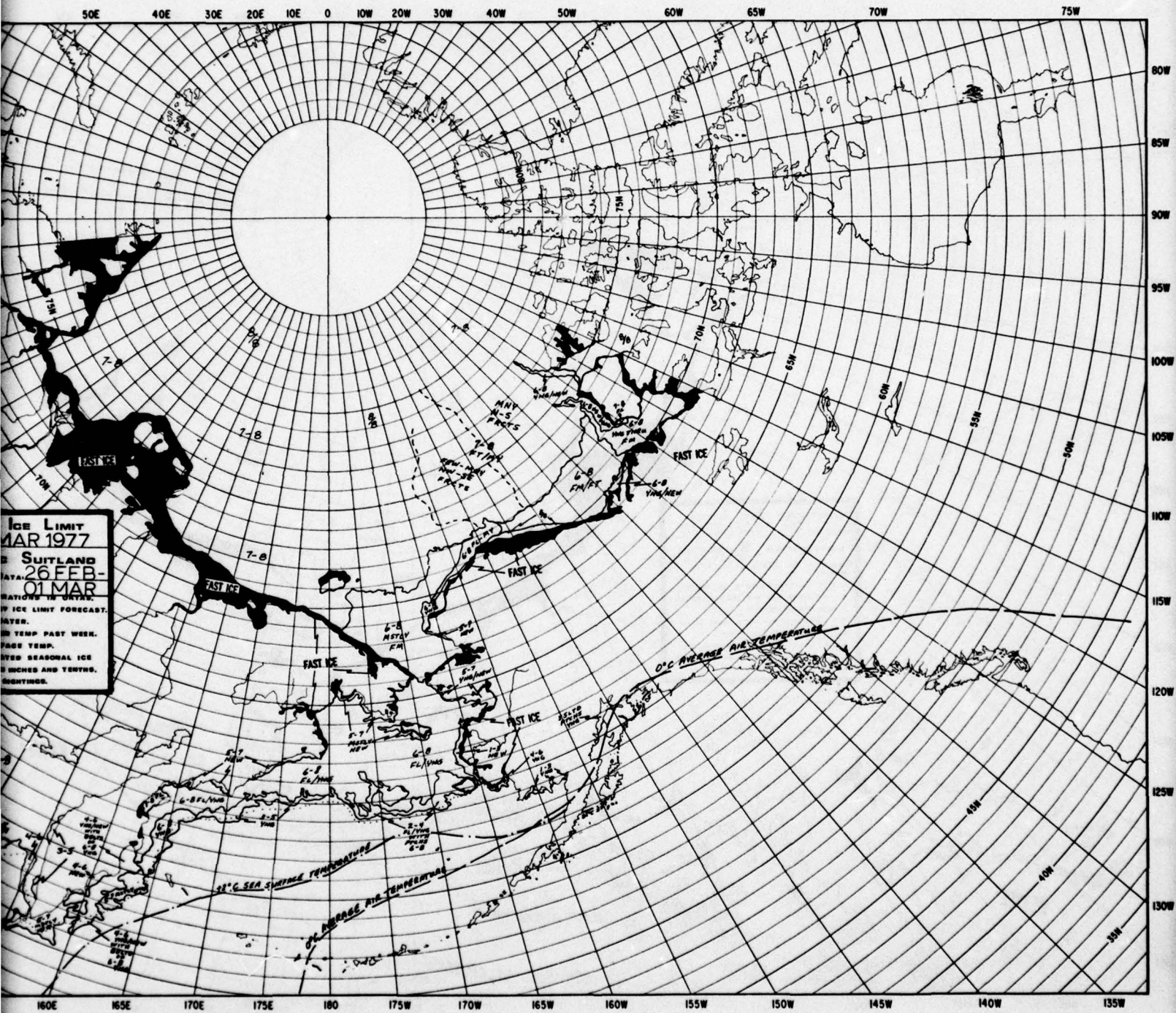


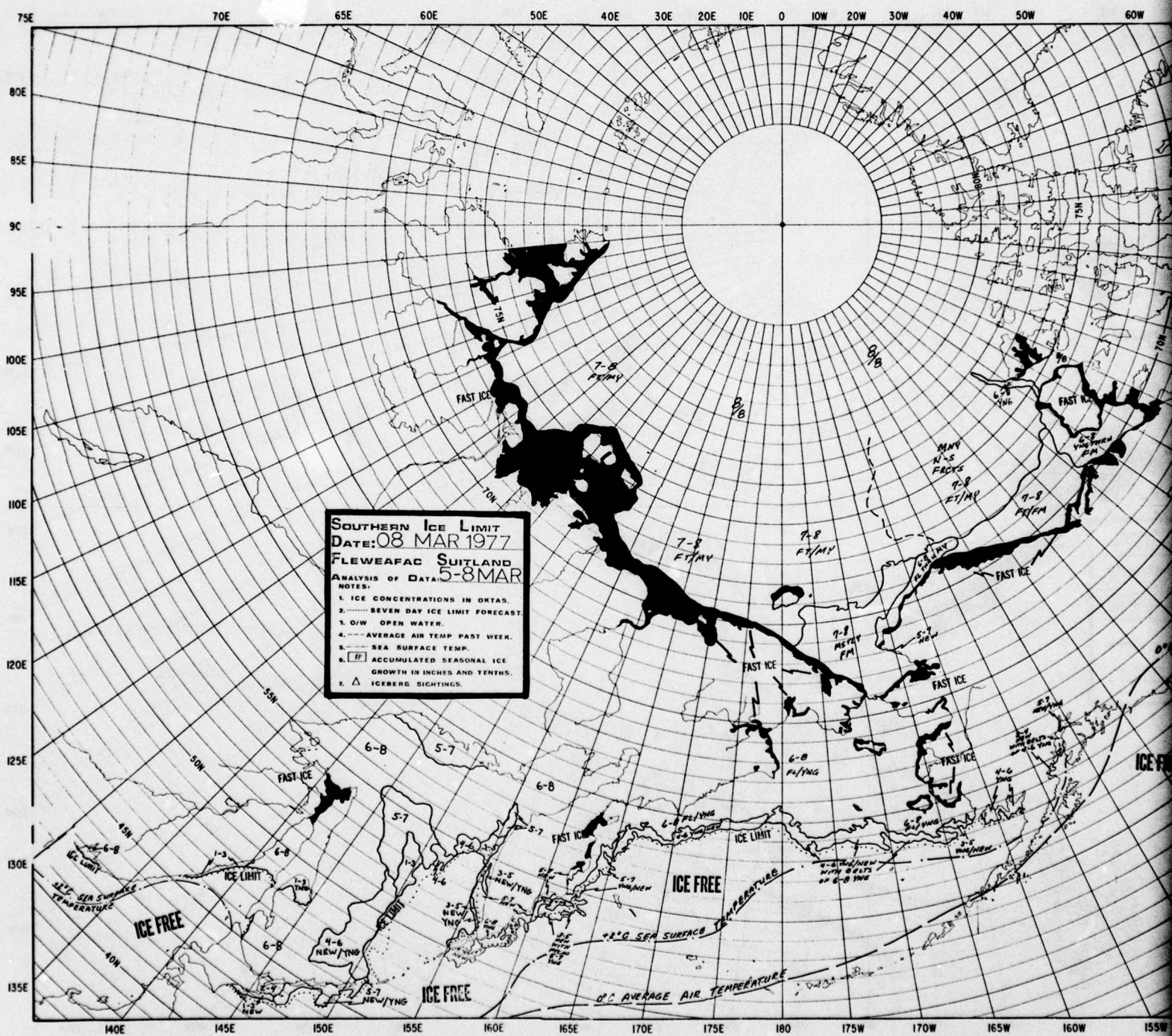


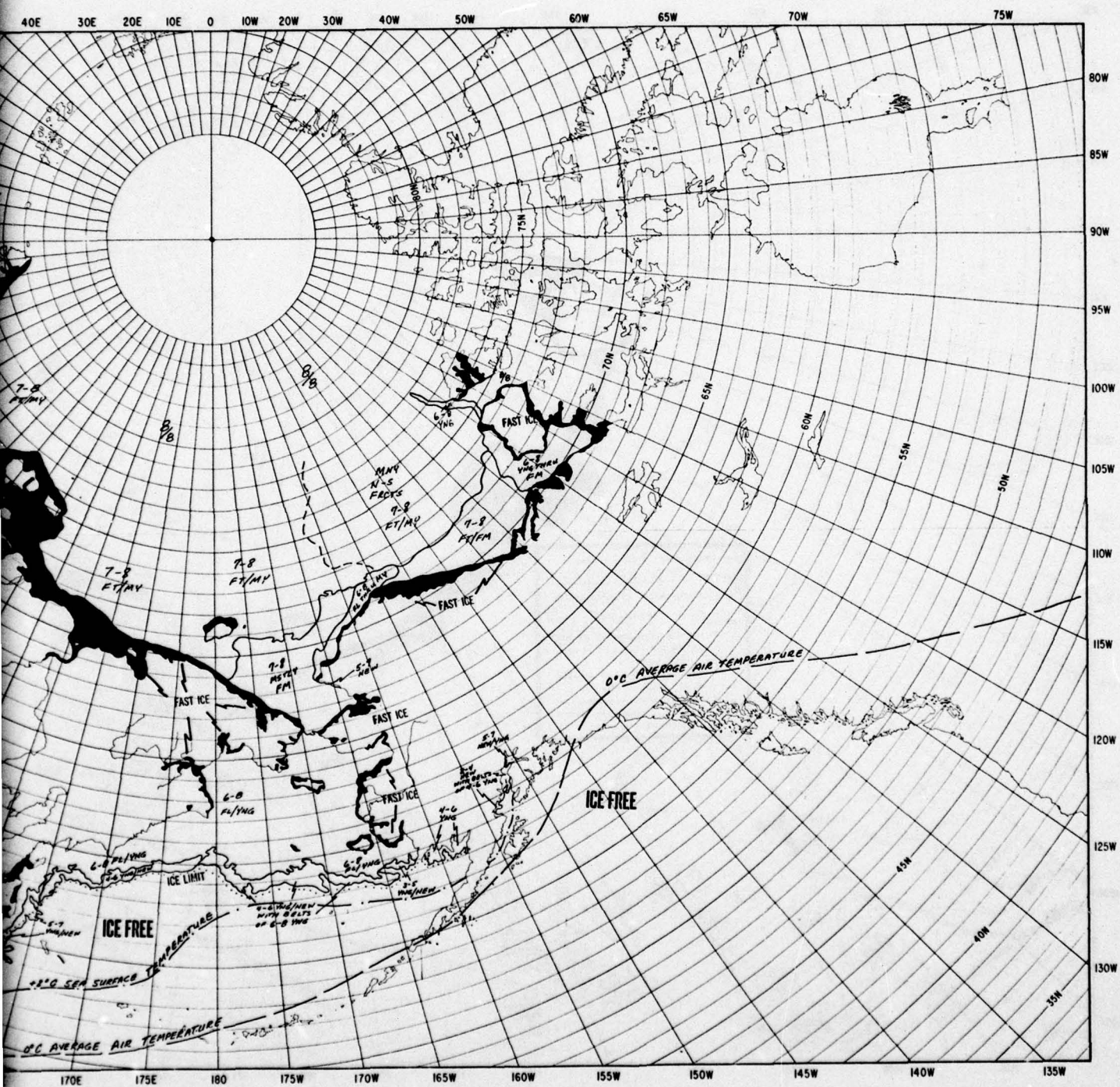


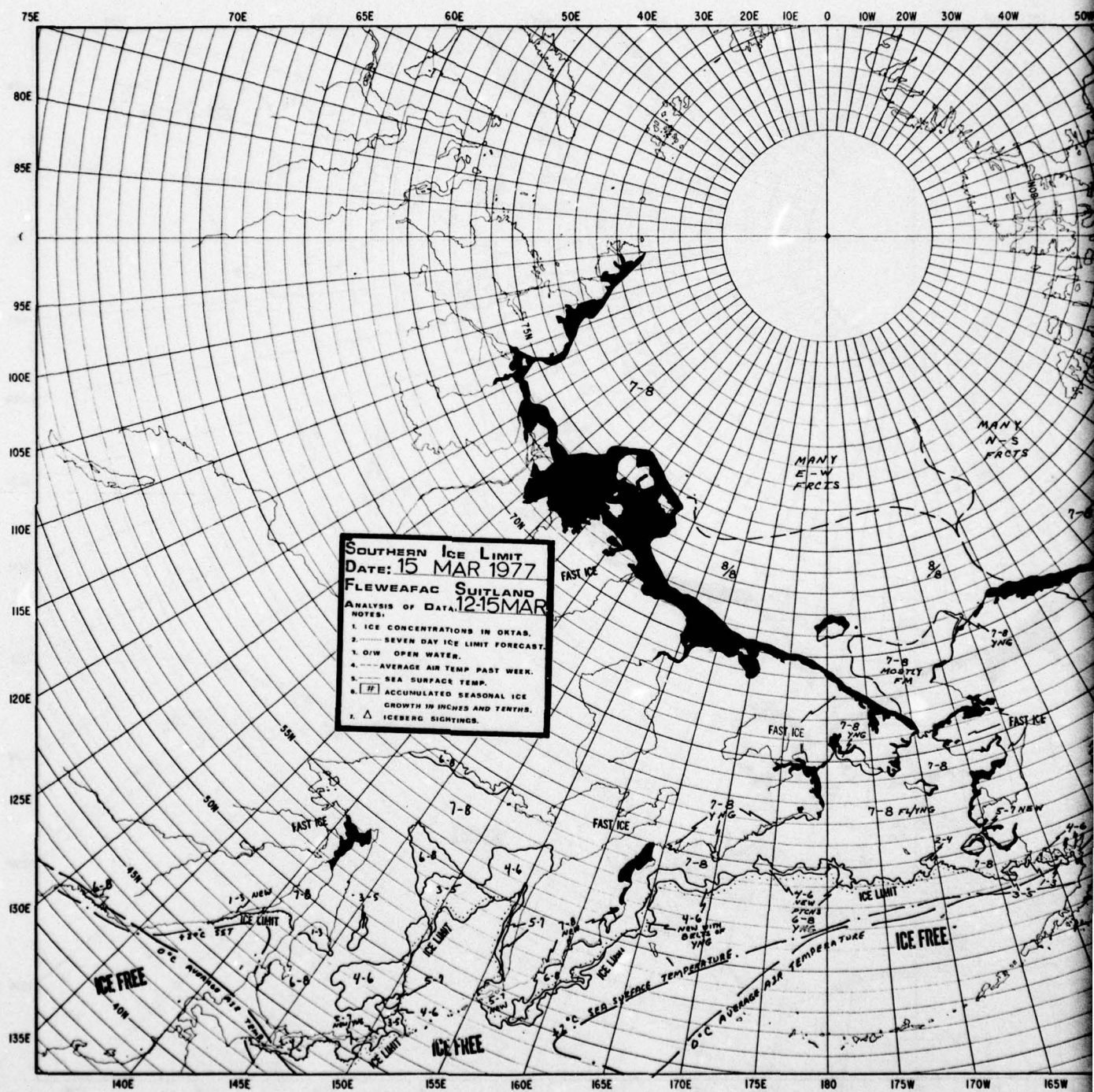


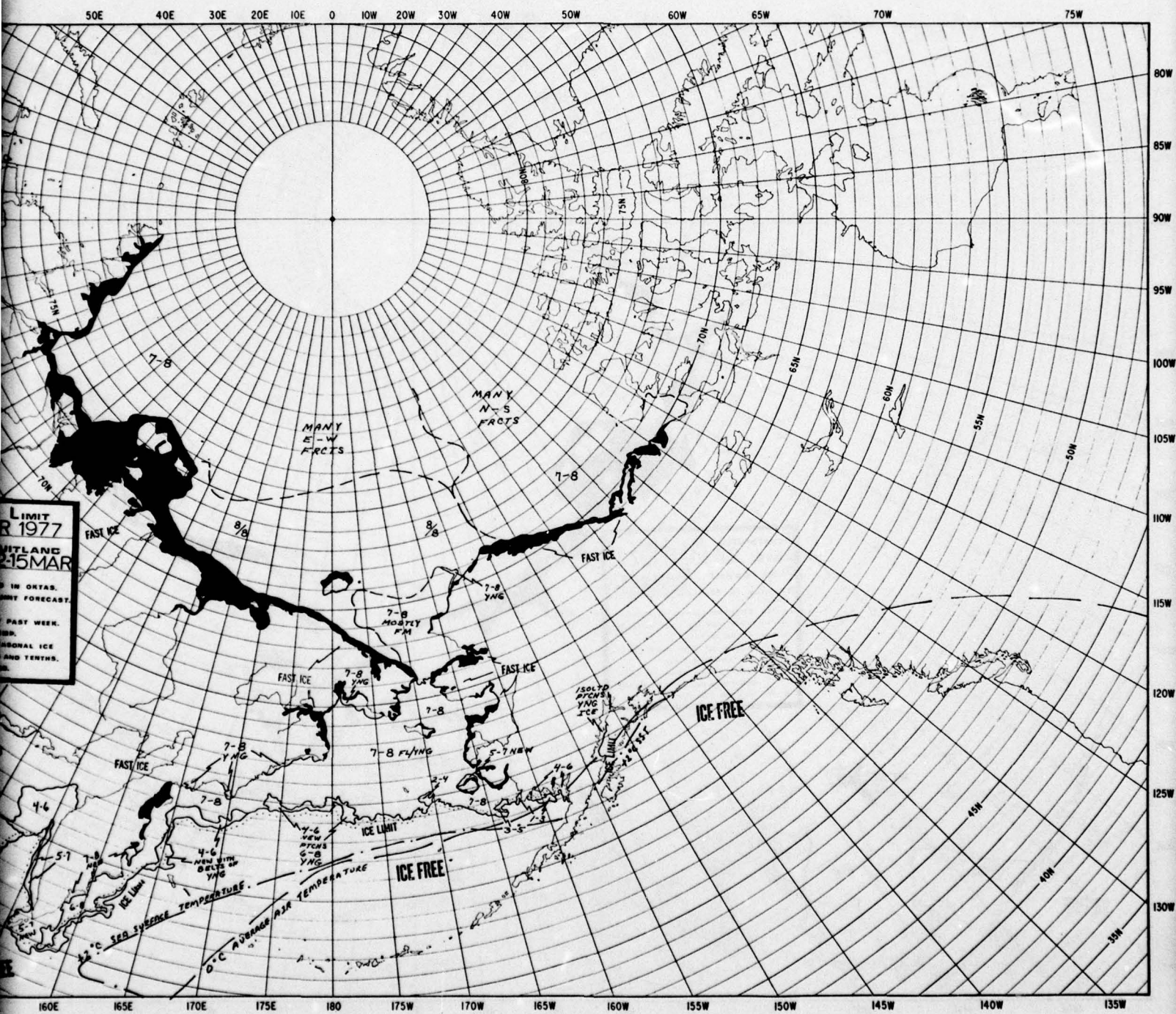


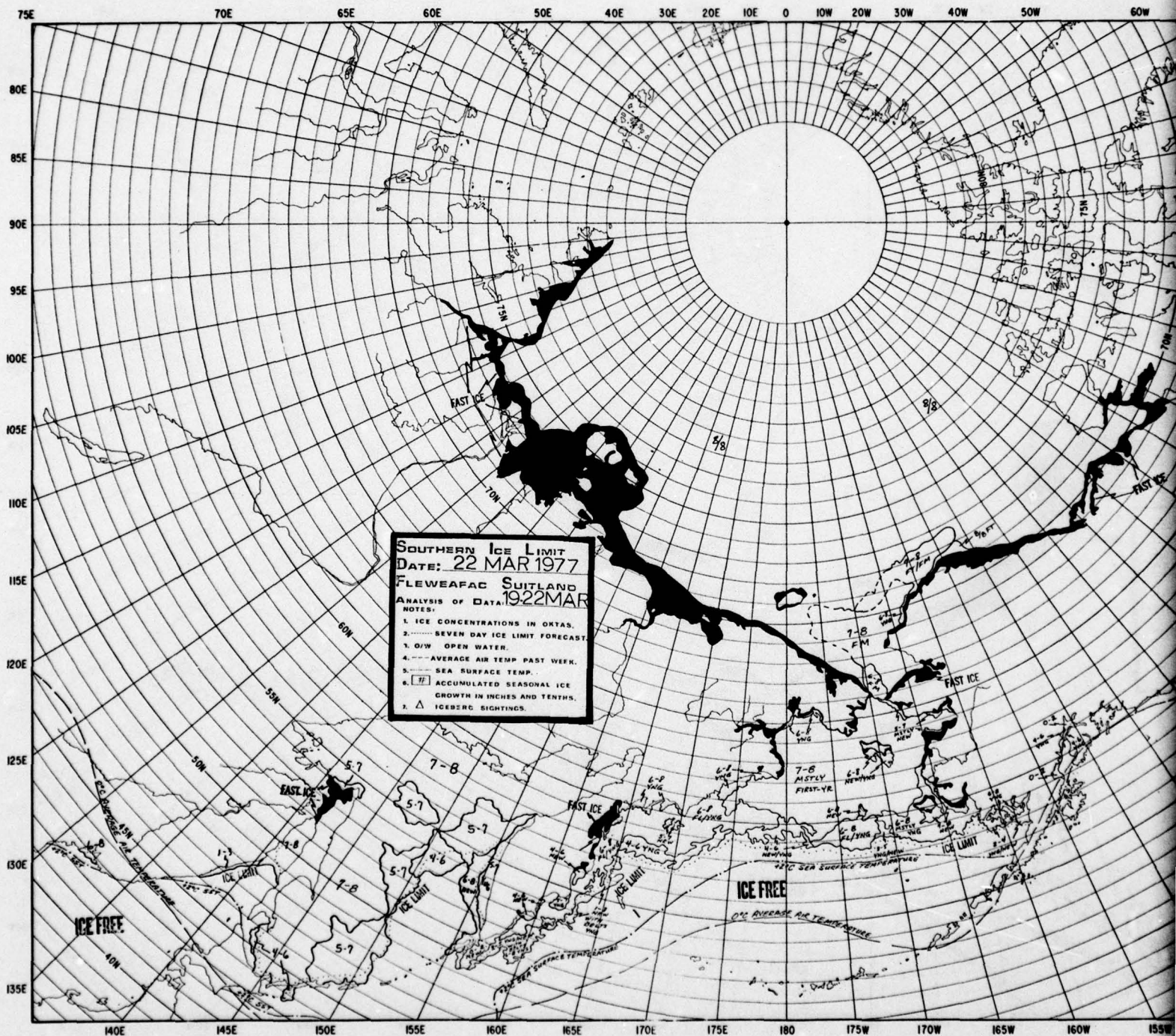


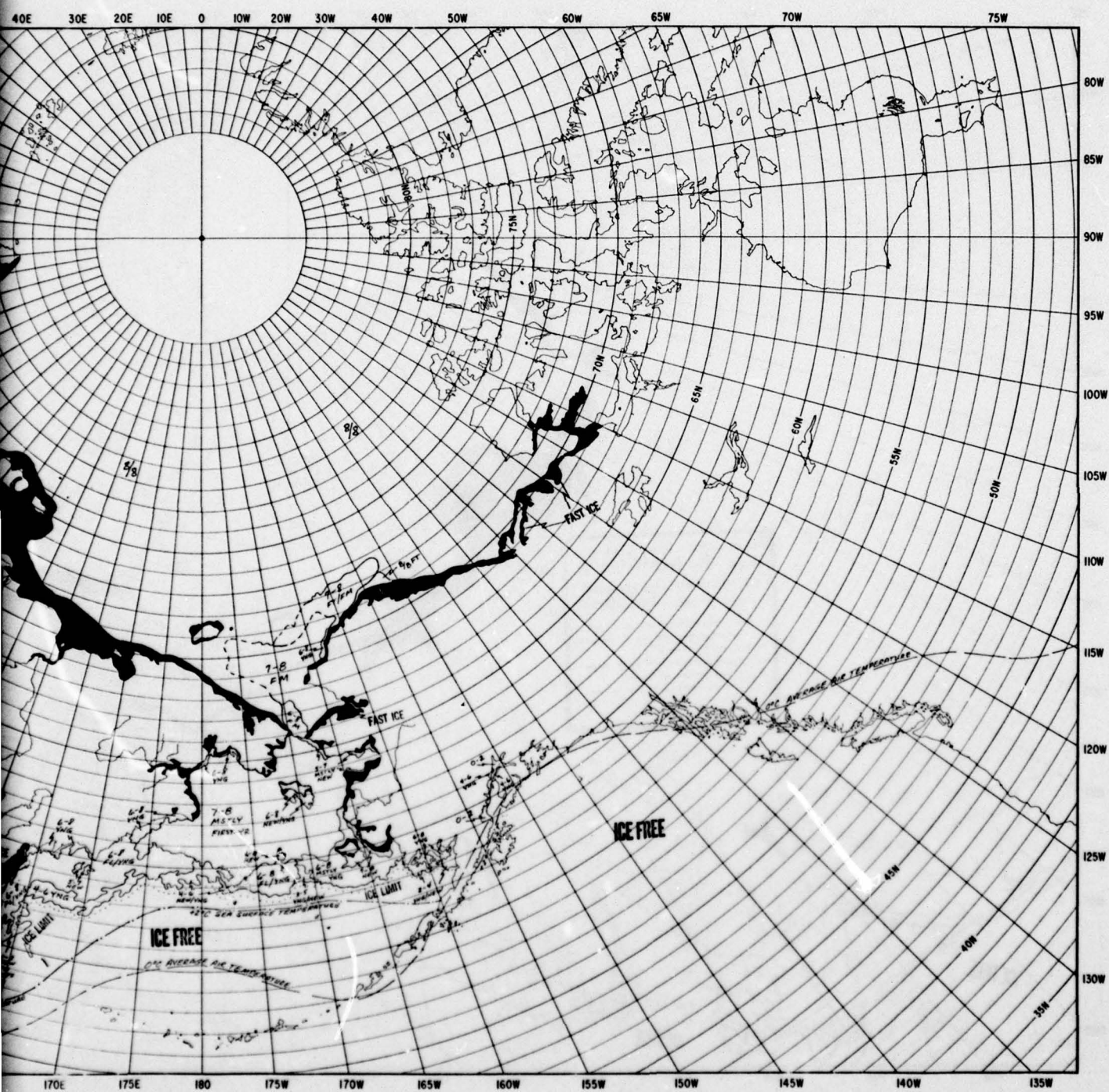


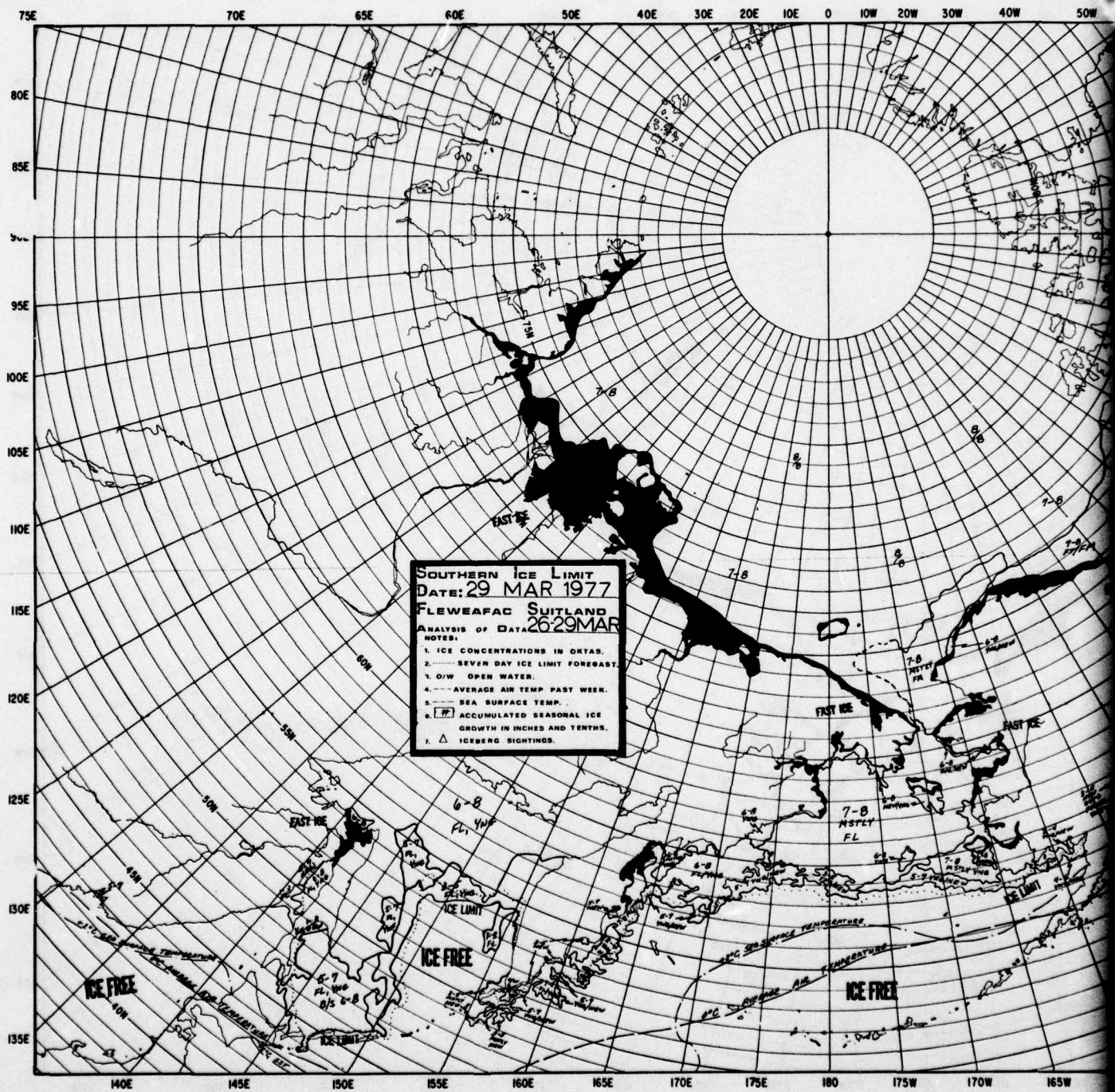


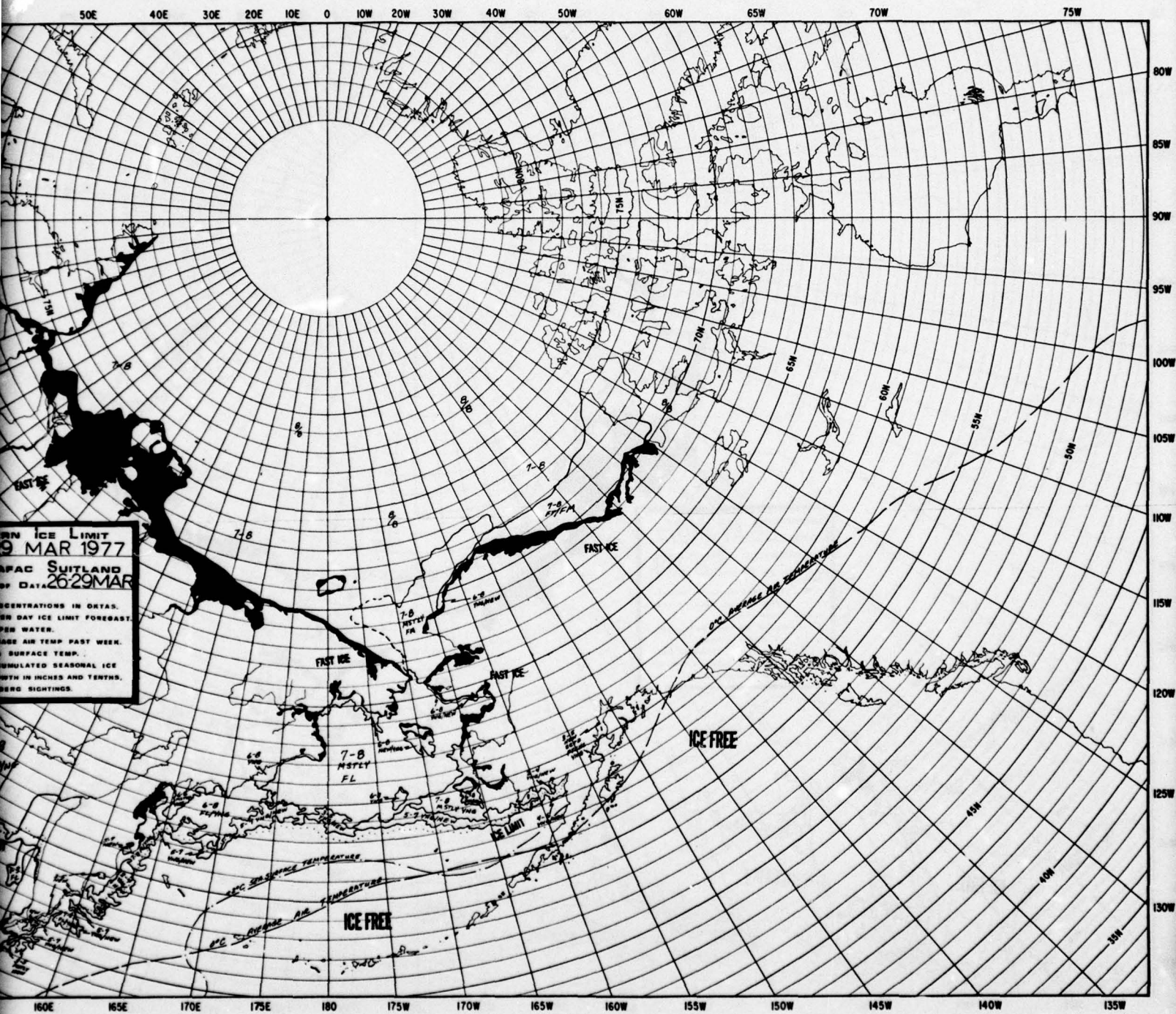


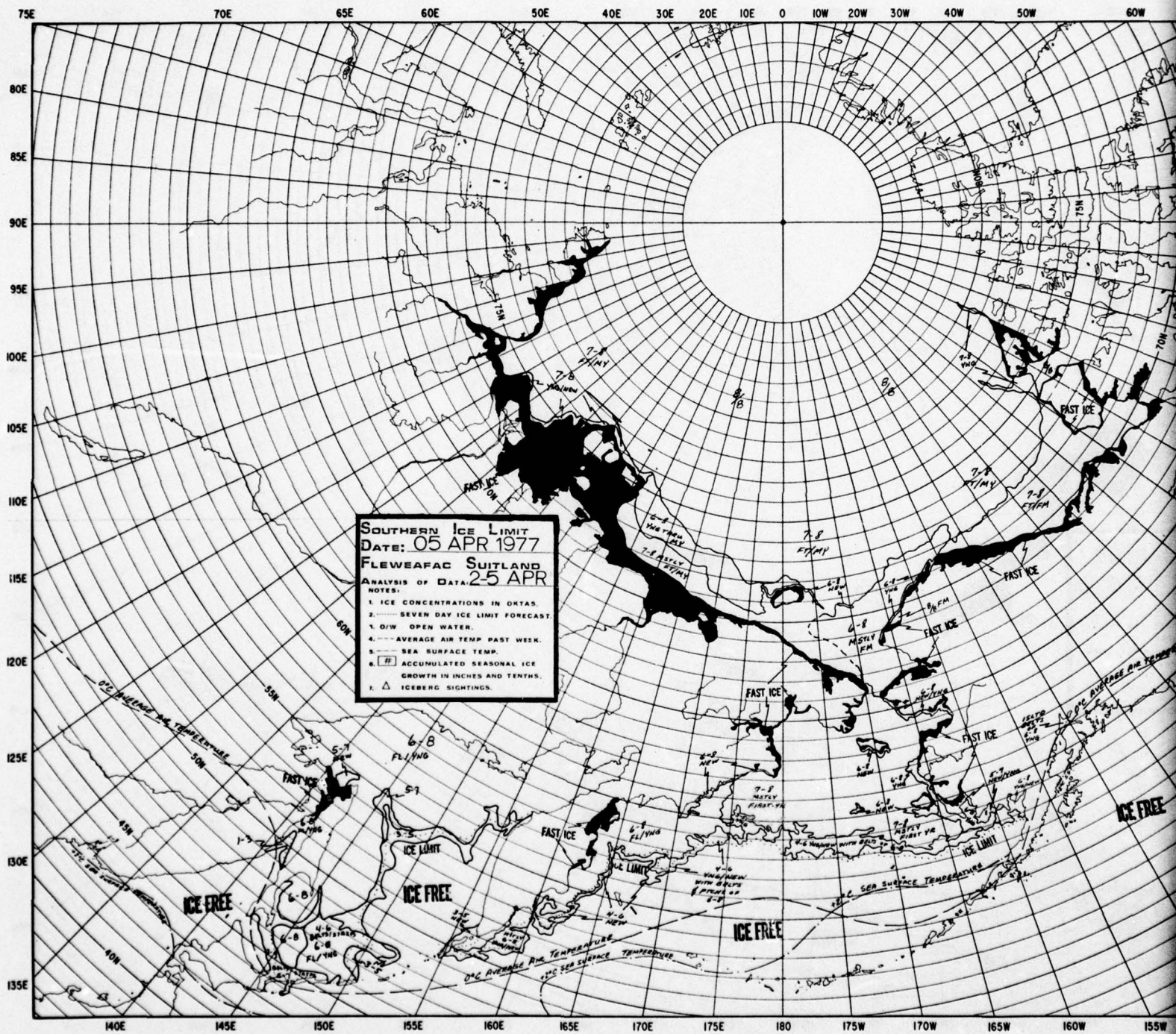


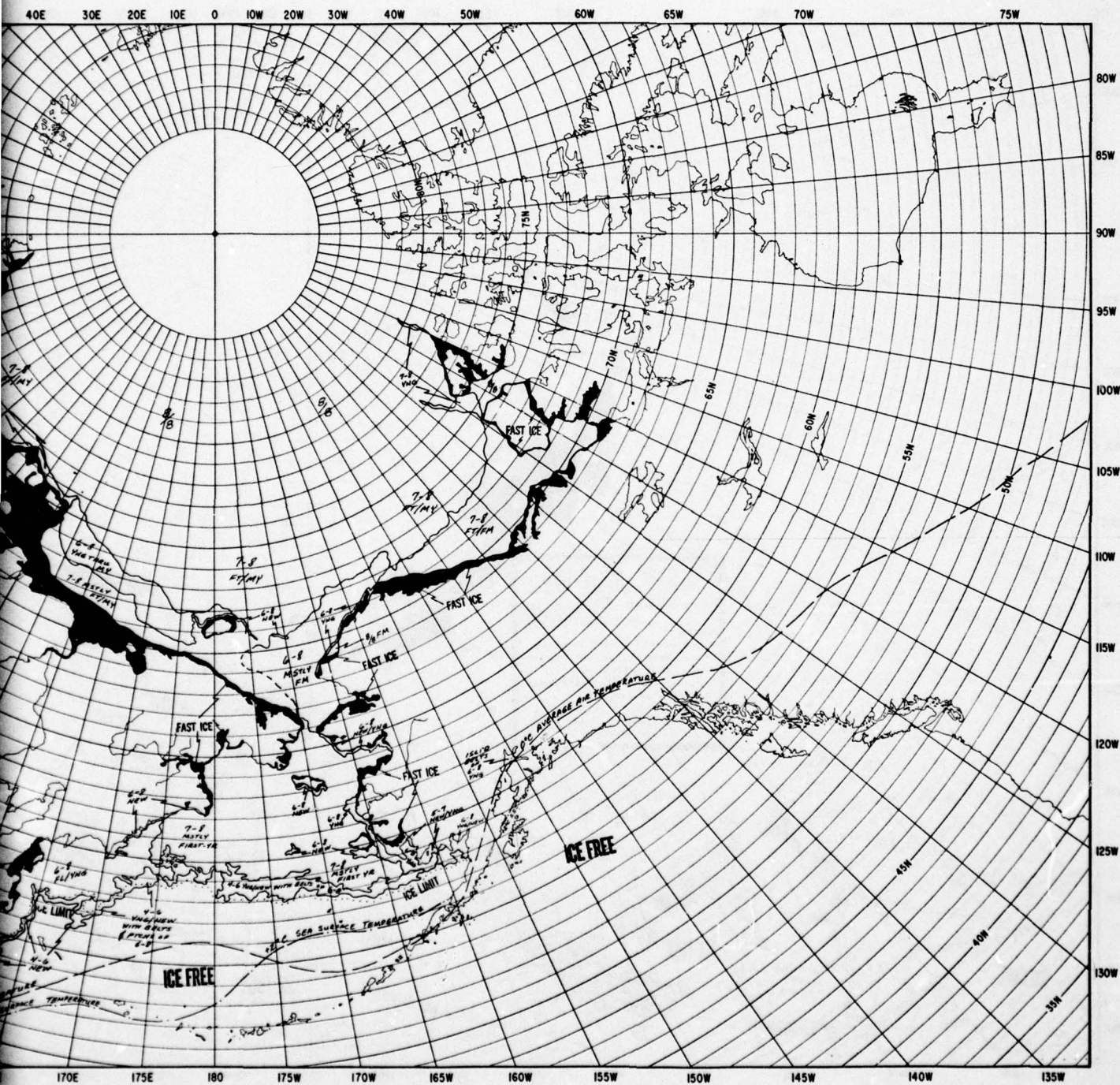


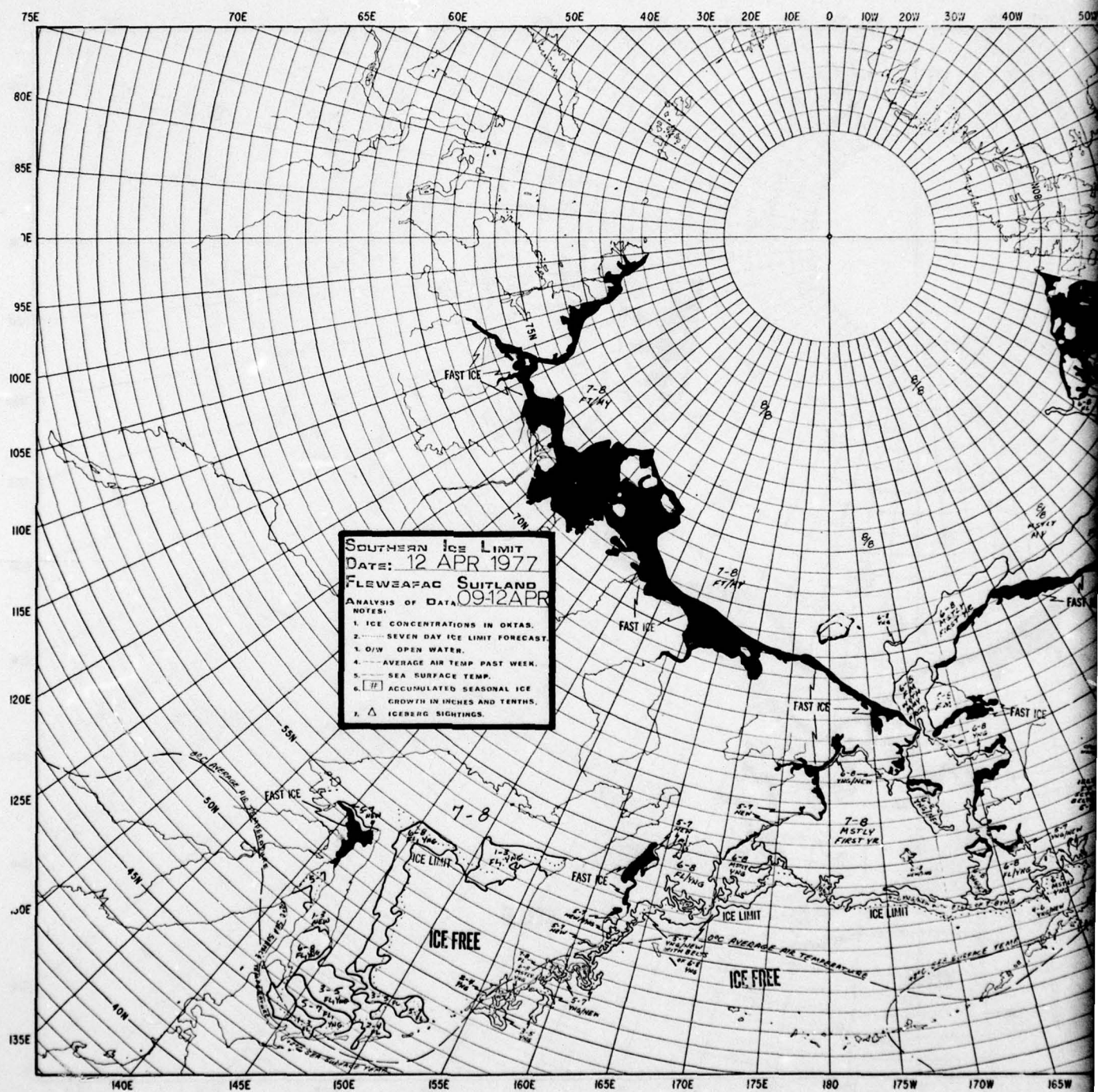


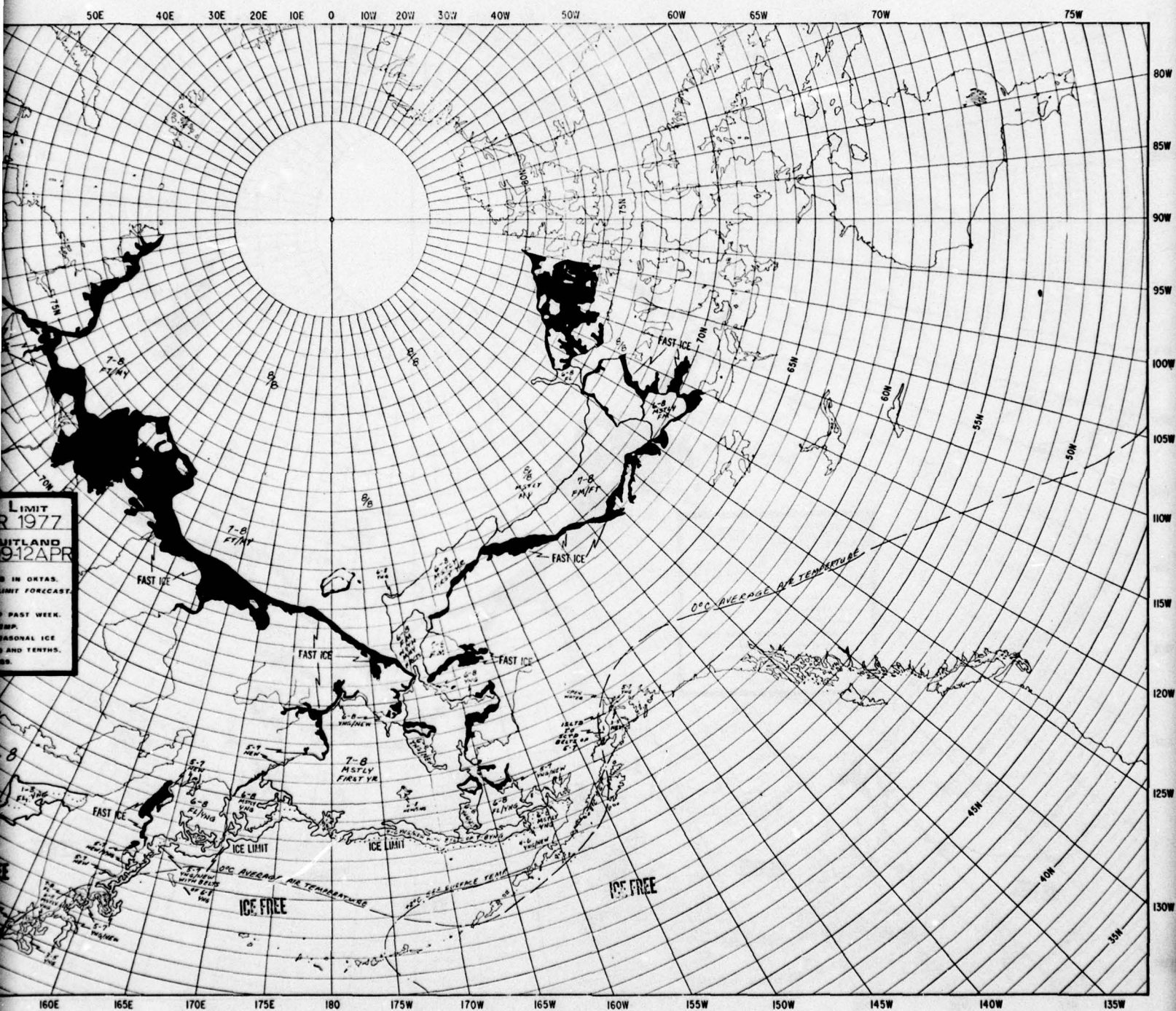


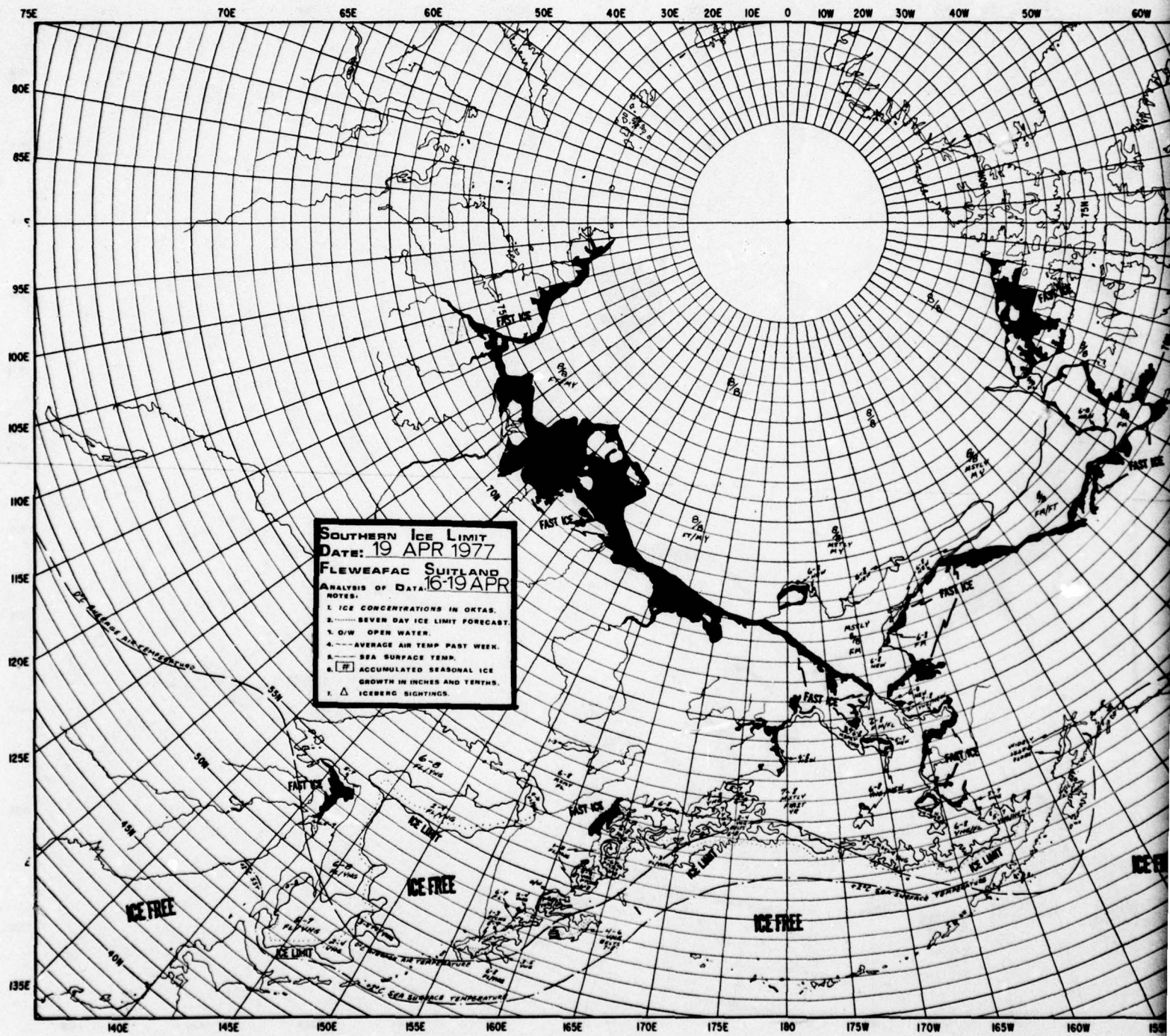


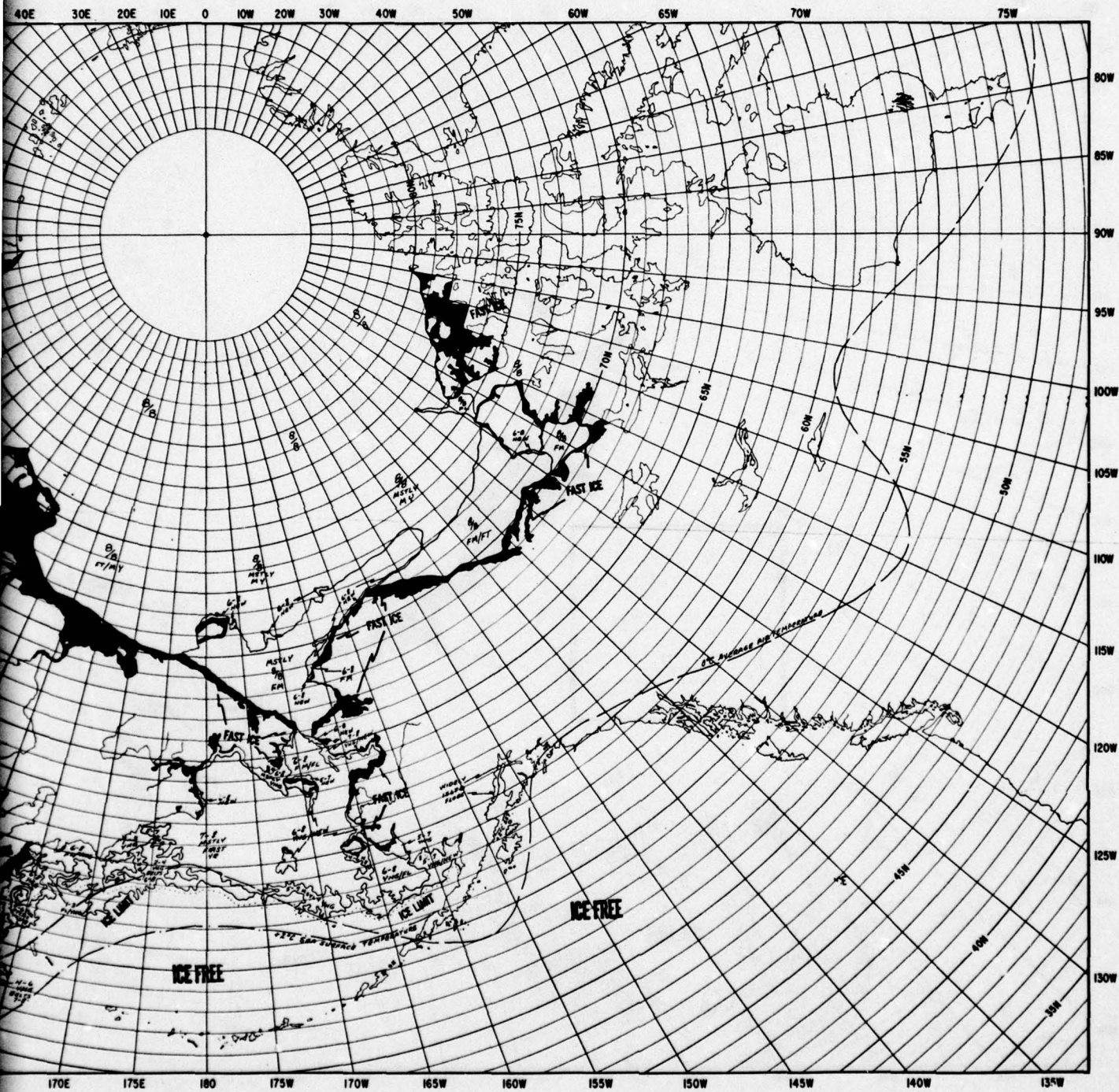


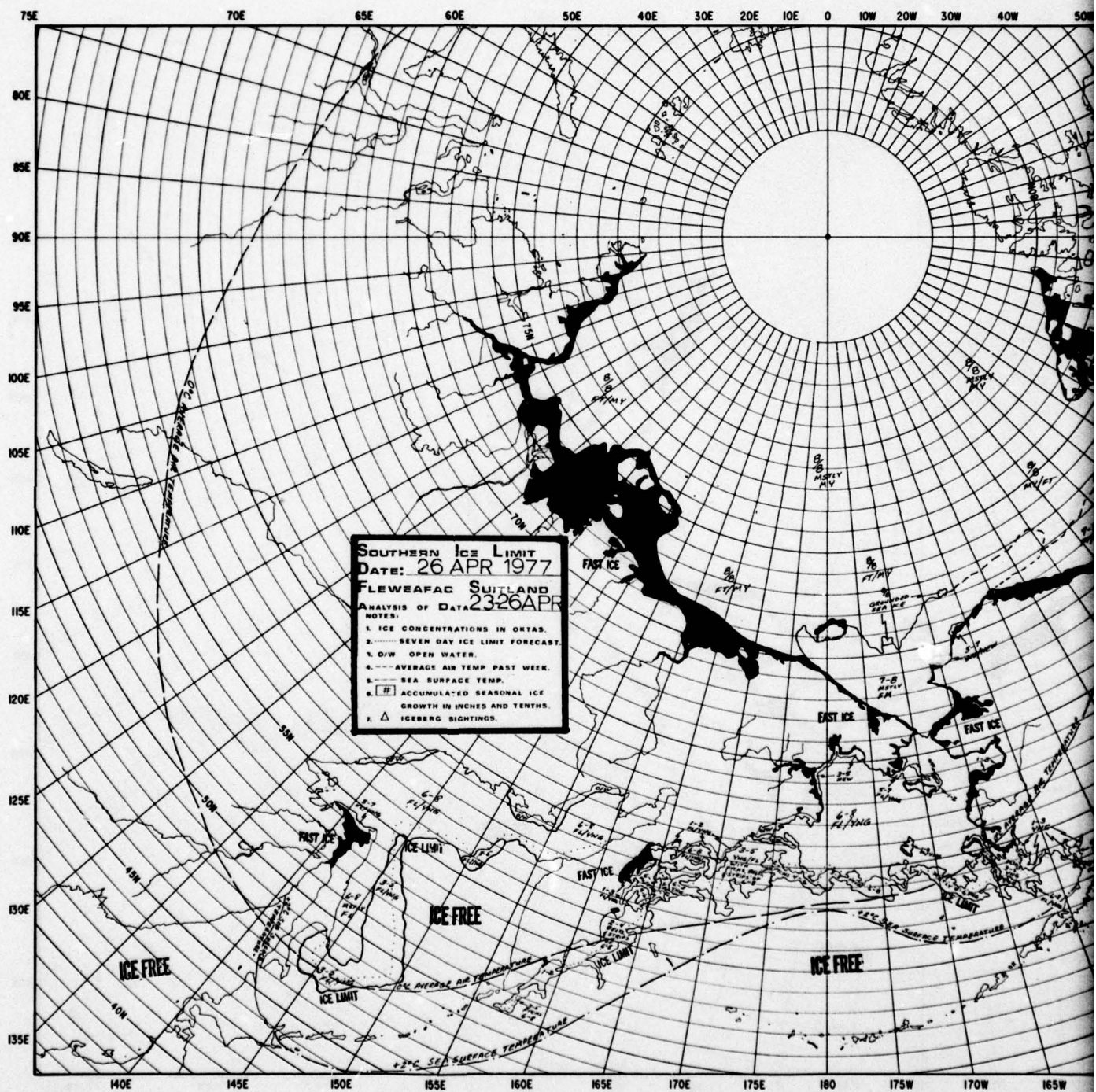


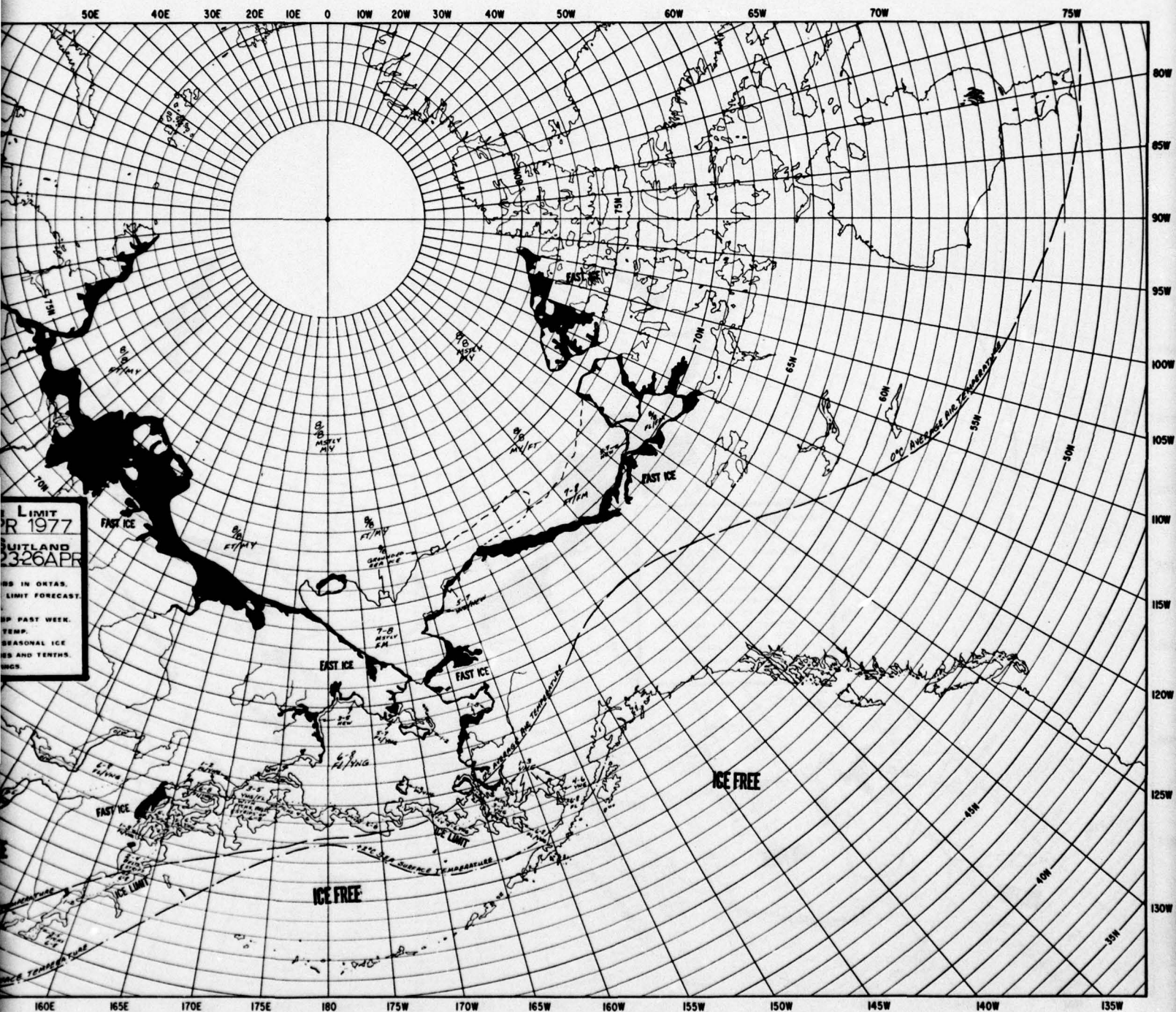


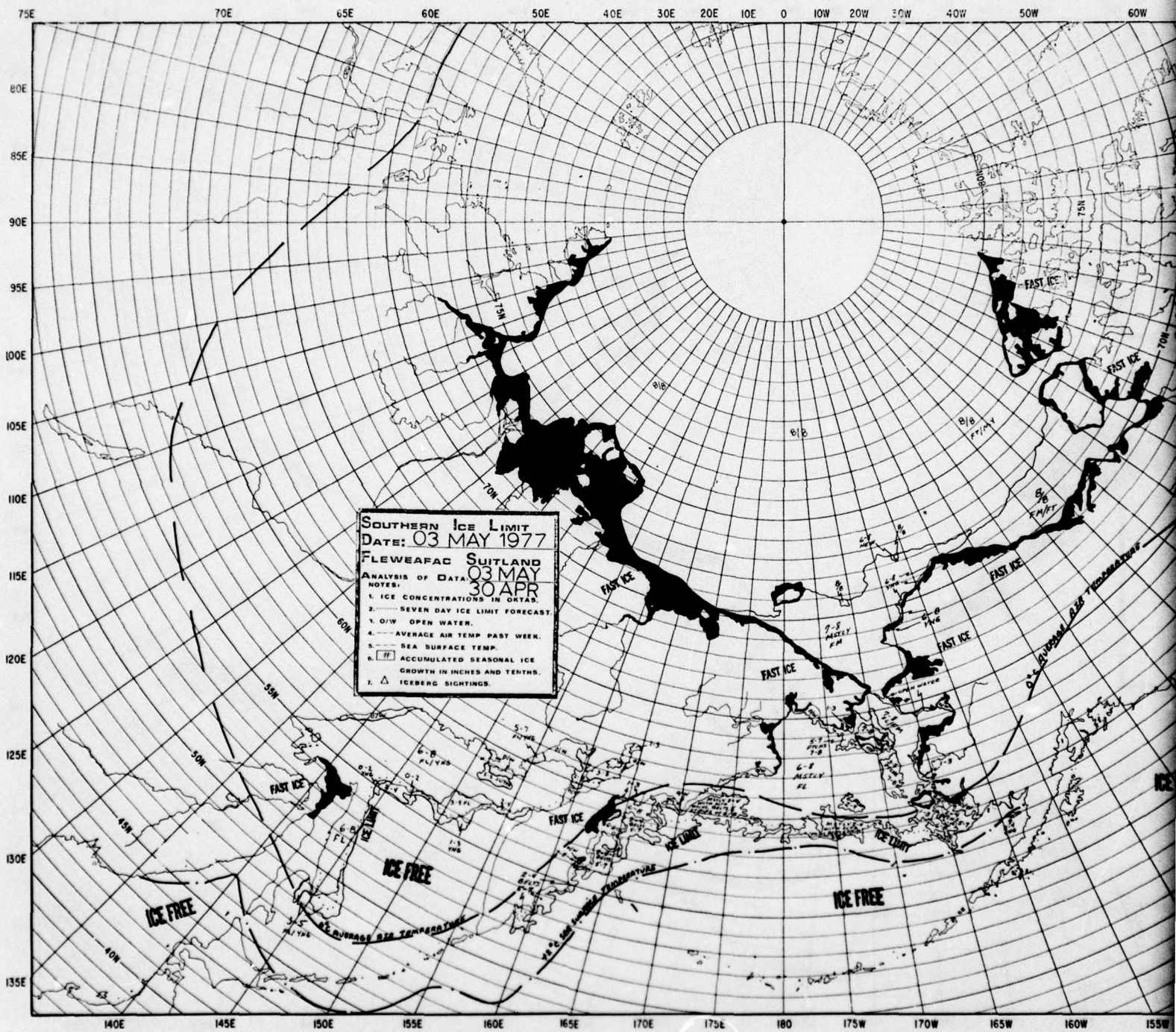


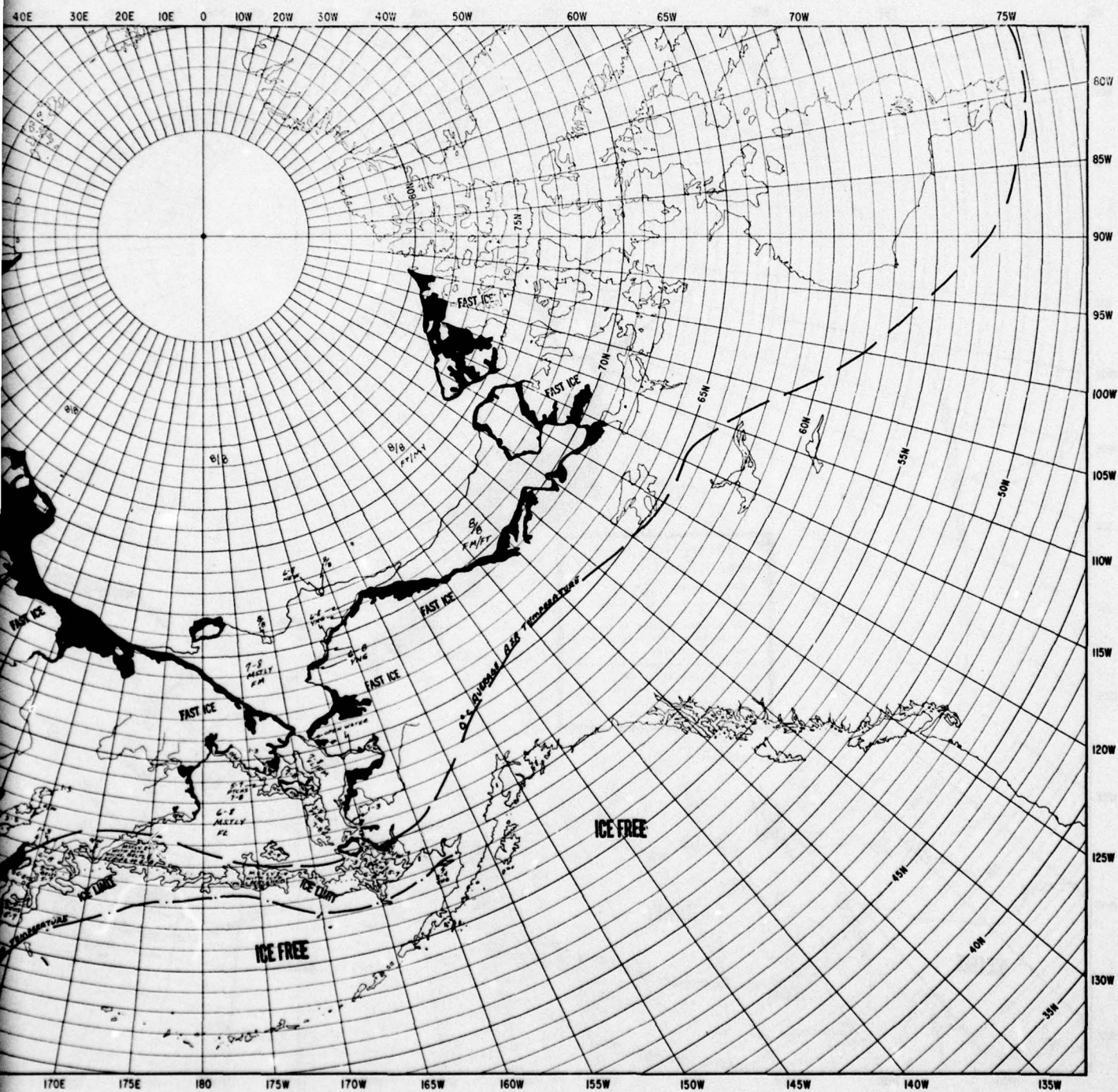


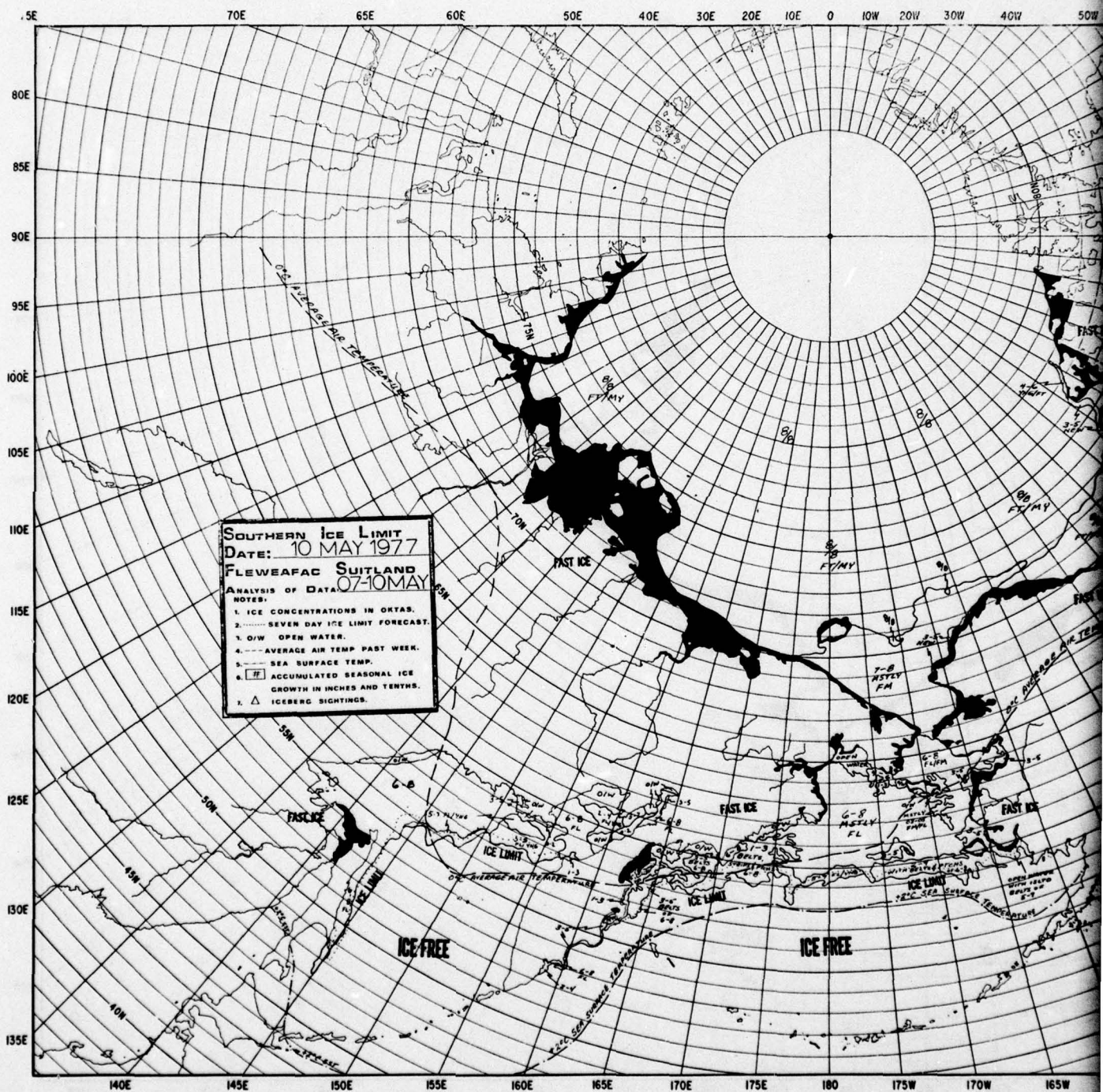


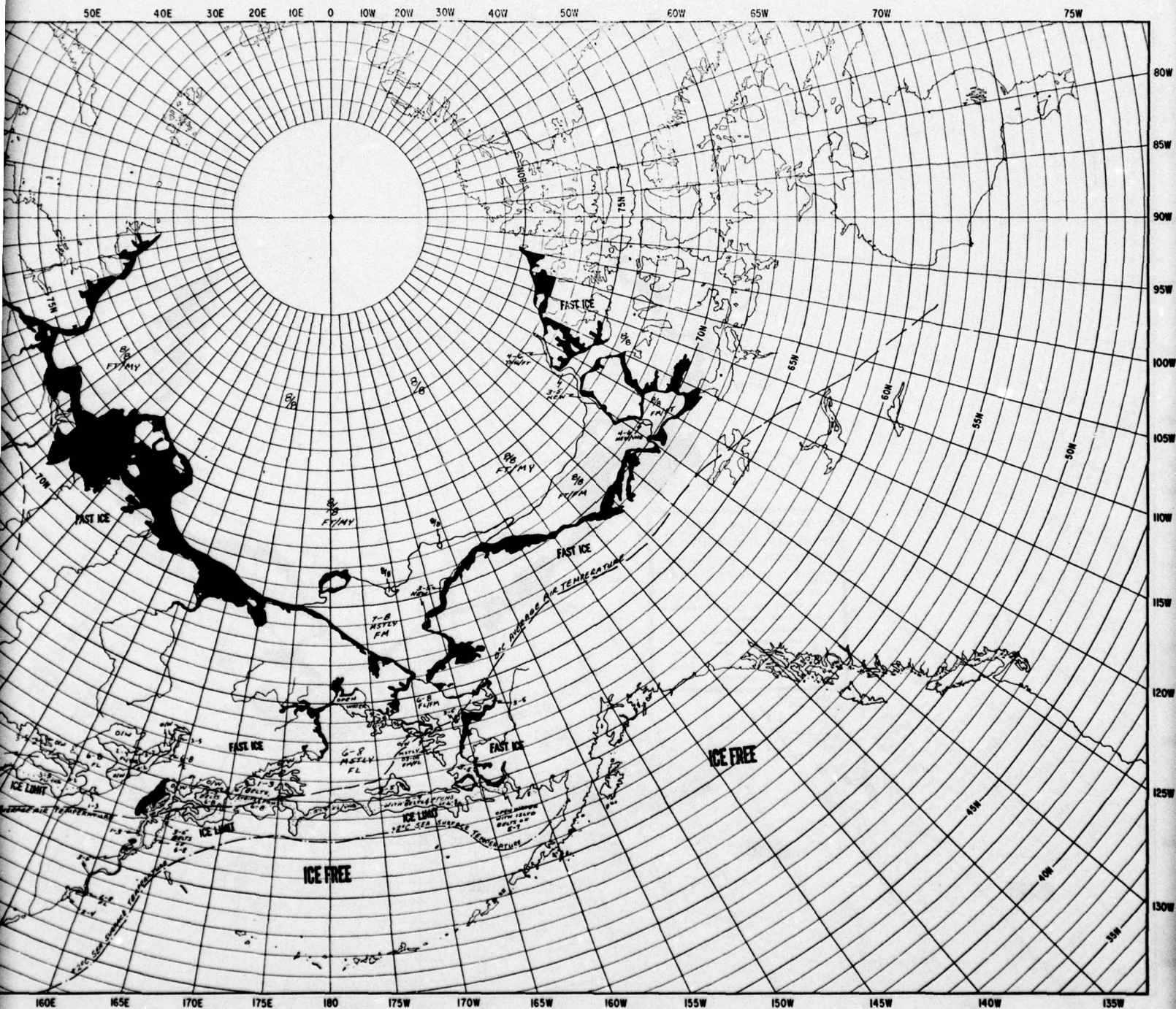


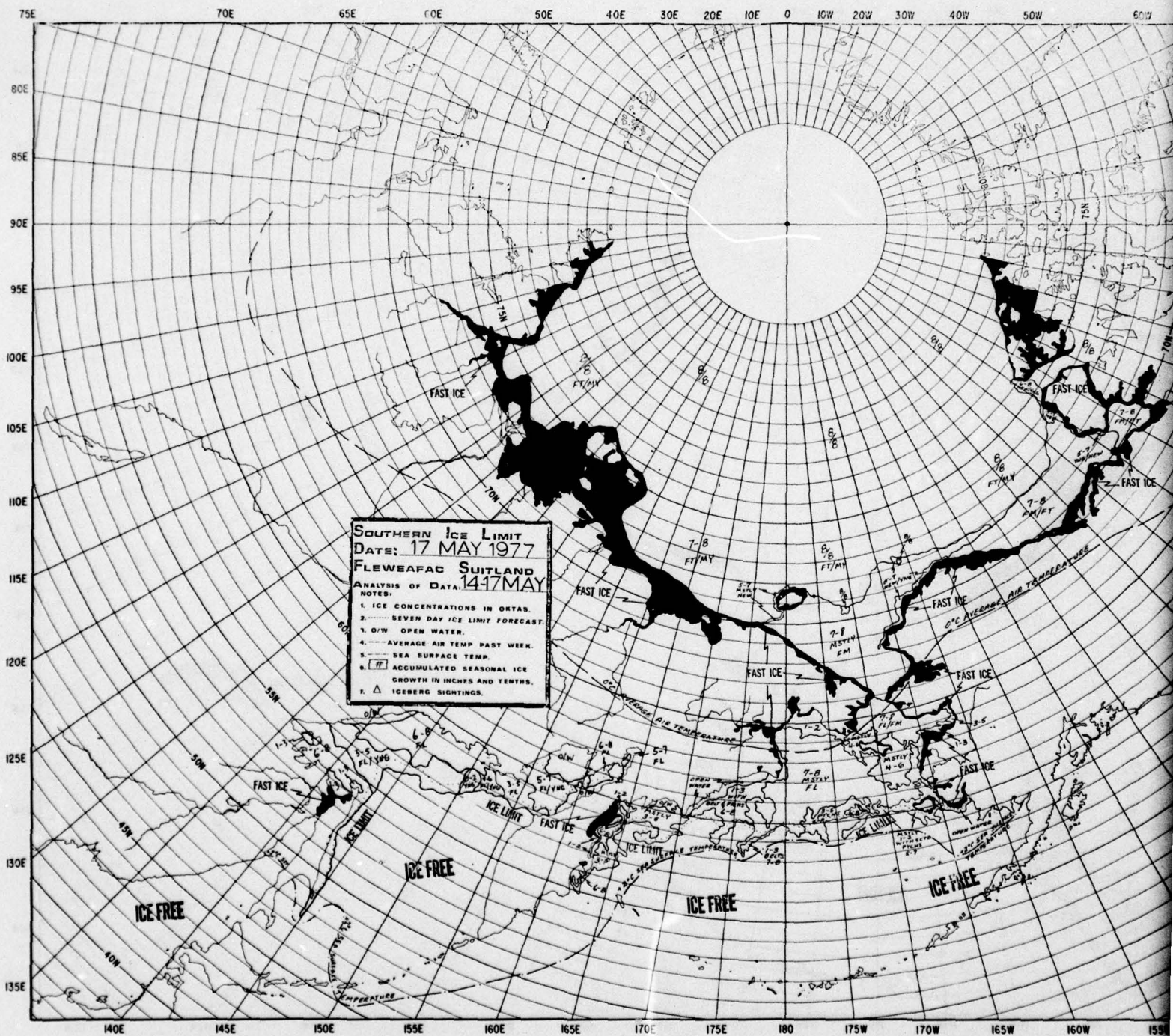




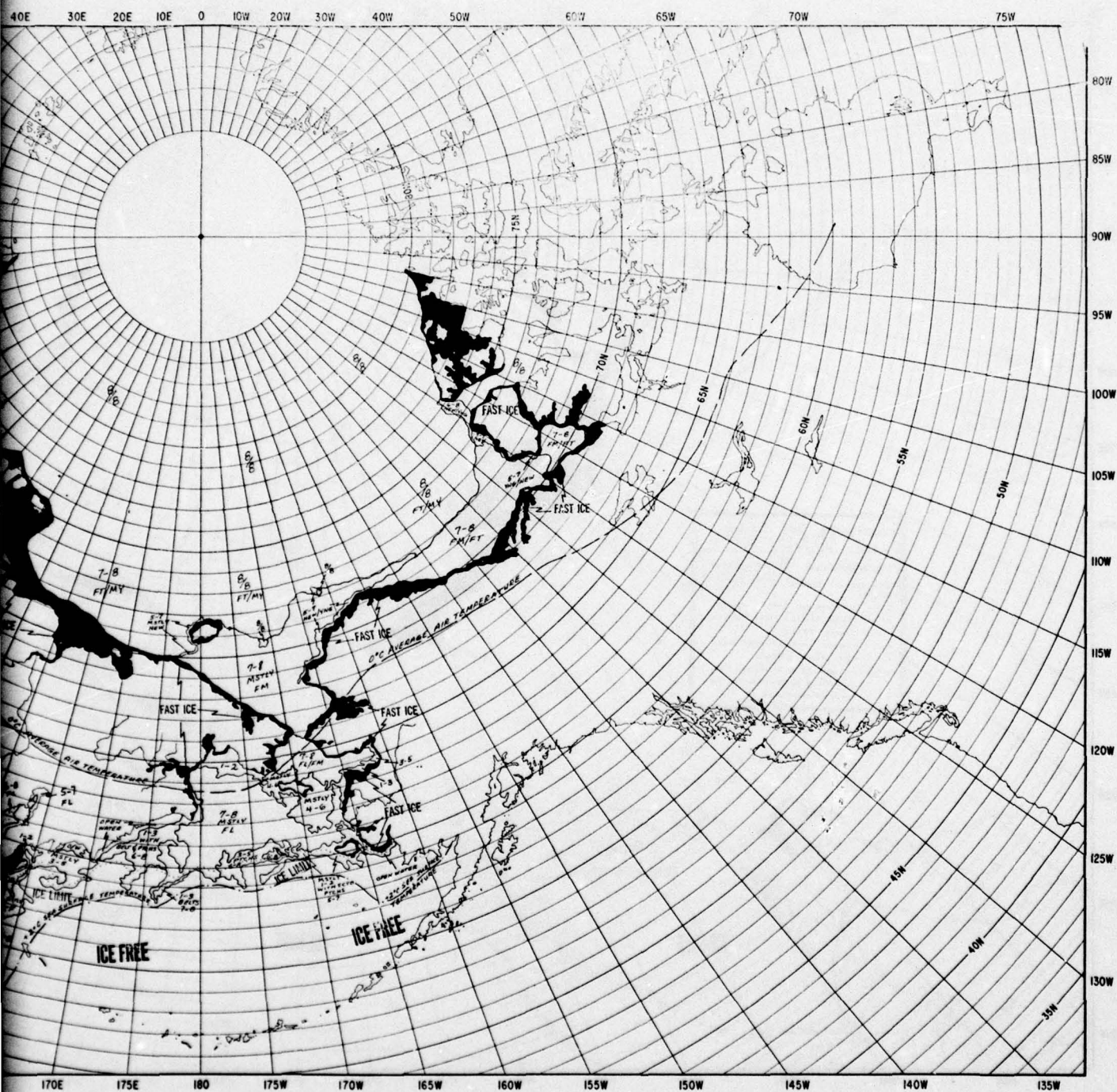


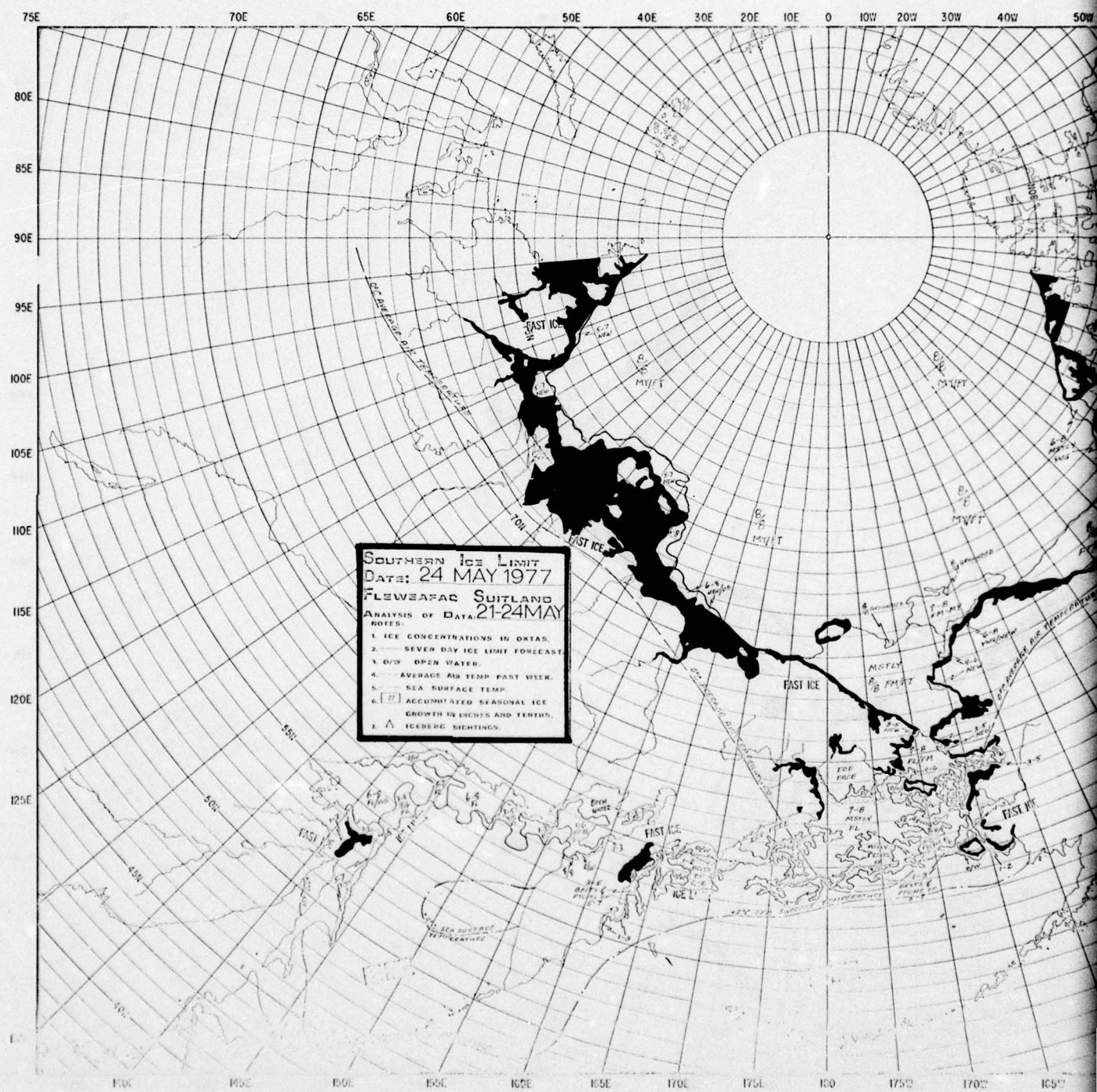


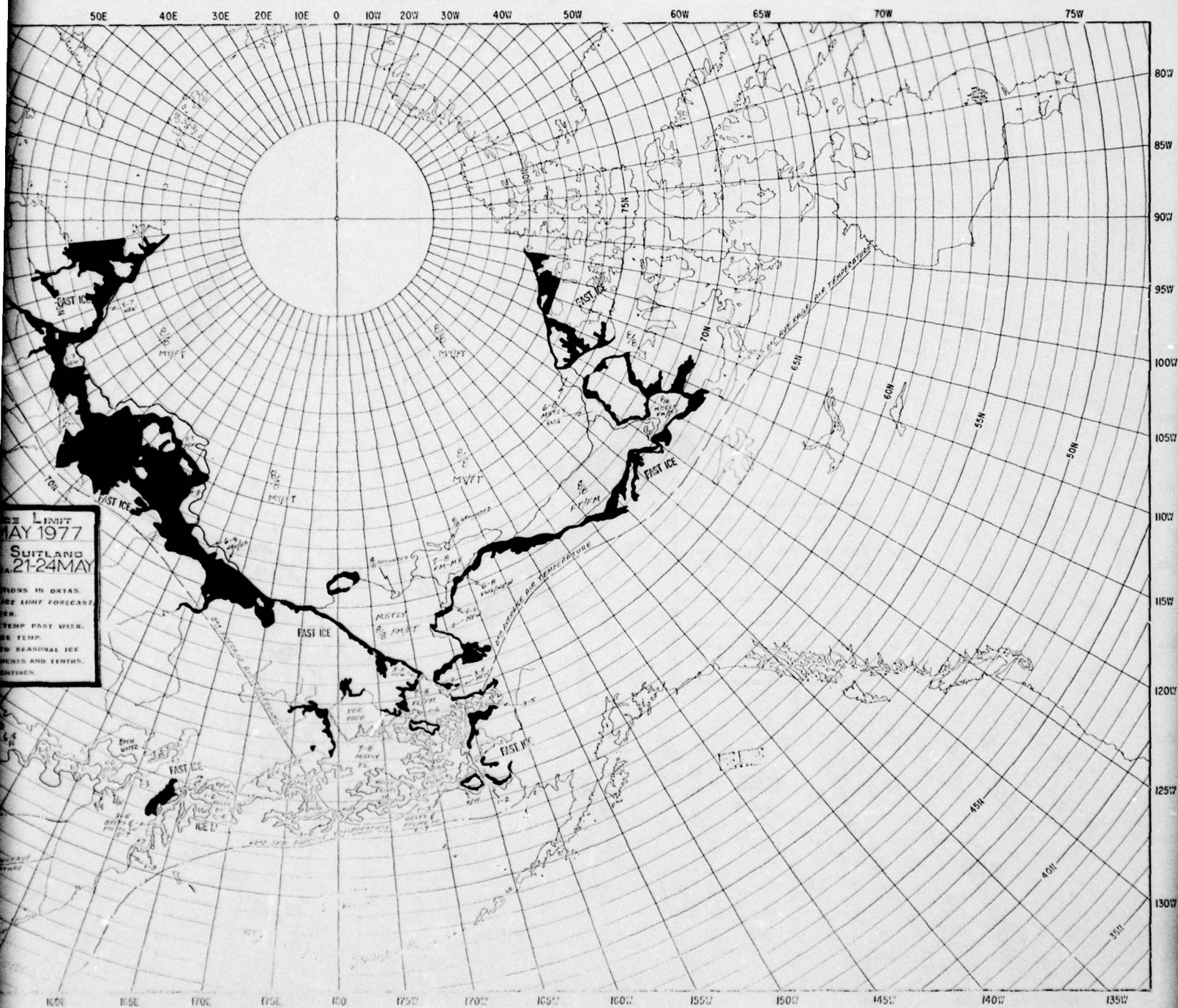


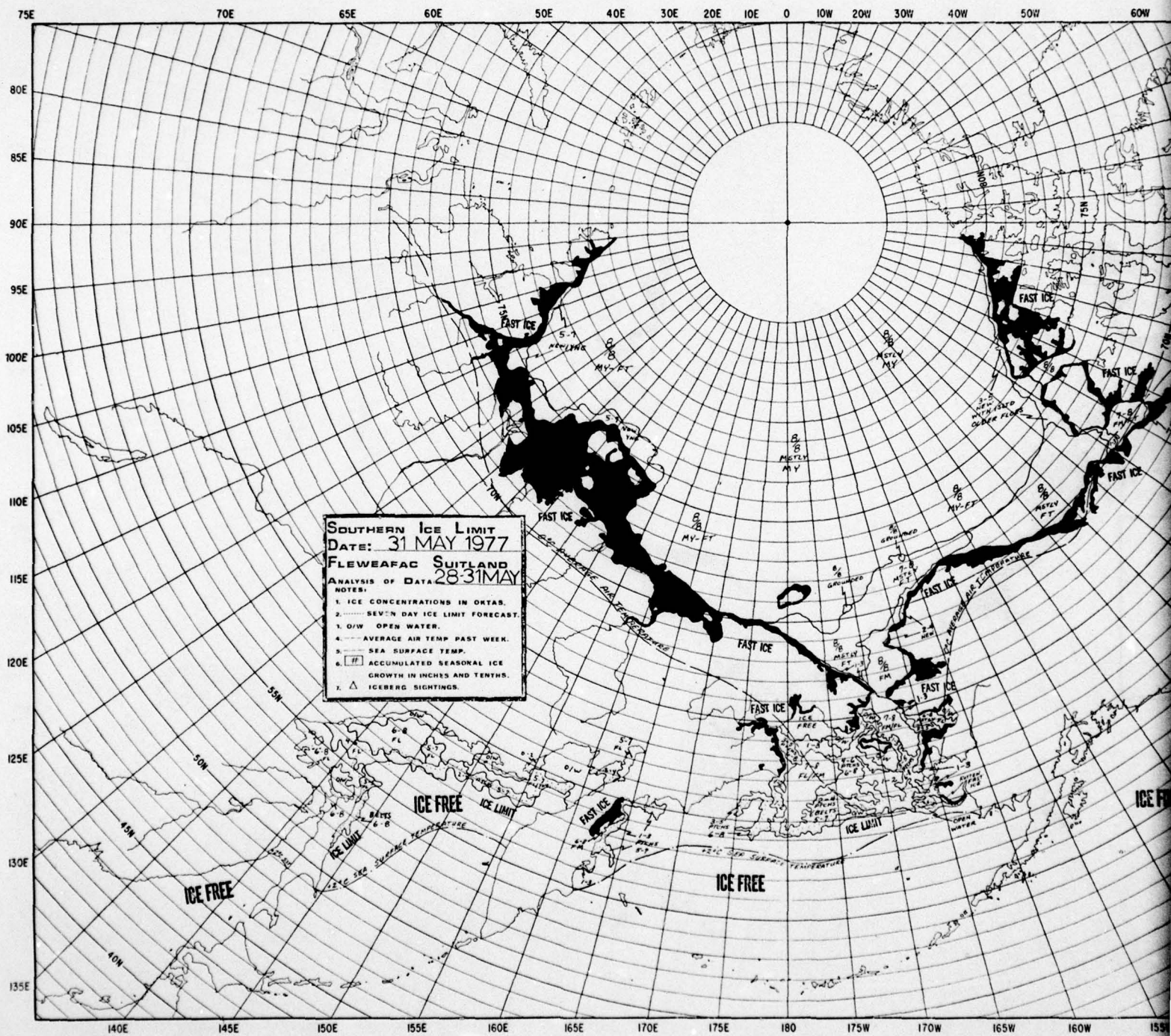


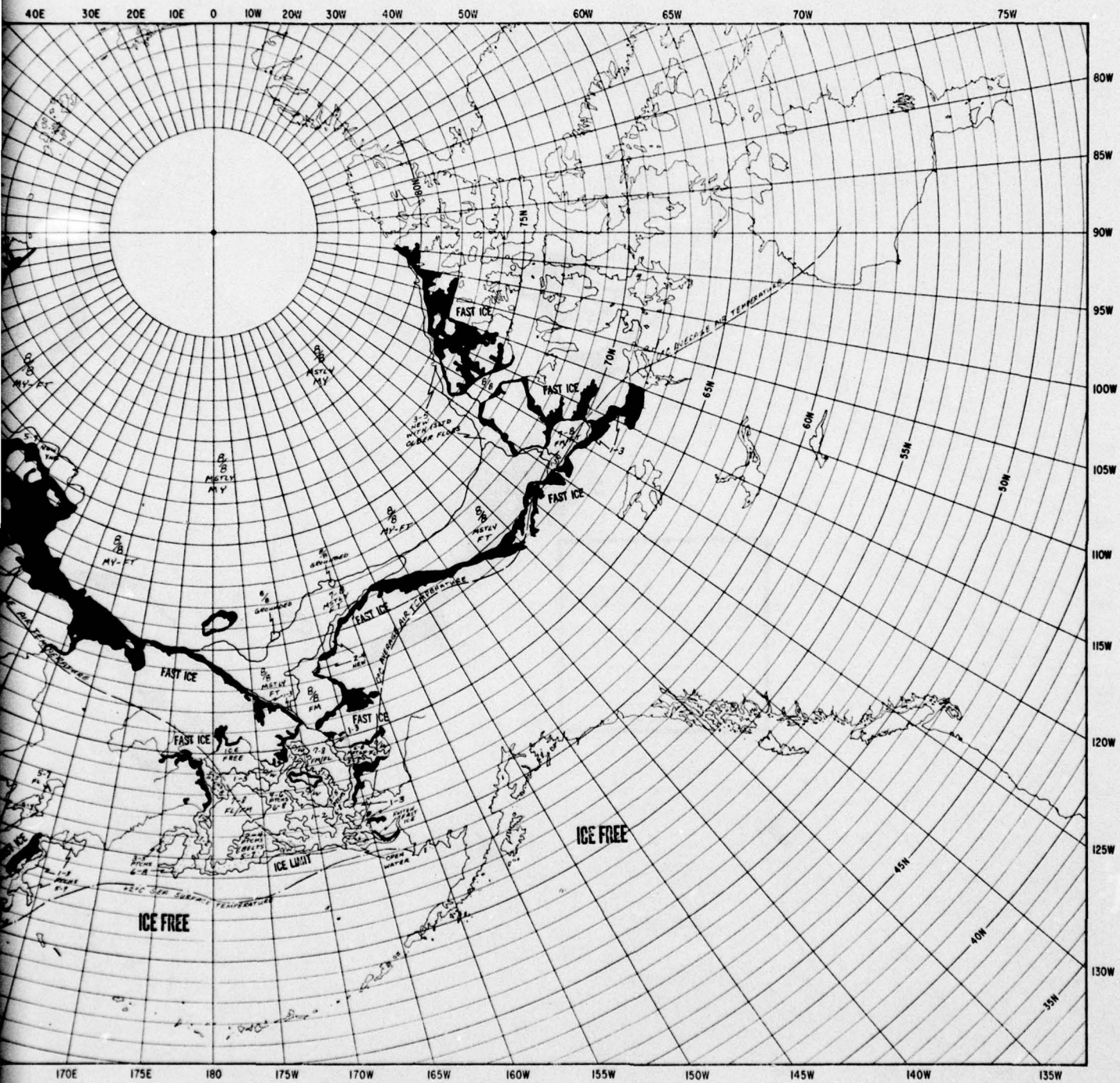
Southern Ice Limit
DATE: 17 MAY 1977
FLEWEAFAC SUTLAND
1417 MAY
ANALYSIS OF DATA:
NOTES:
1. ICE CONCENTRATIONS IN ORTAS.
2. SEVEN DAY ICE LIMIT FORECAST.
3. O/W OPEN WATER.
4. AVERAGE AIR TEMP PAST WEEK.
5. SEA SURFACE TEMP.
6. ACCUMULATED SEASONAL ICE GROWTH IN INCHES AND TENTHS.
7. ICEBERG SIGHTINGS.

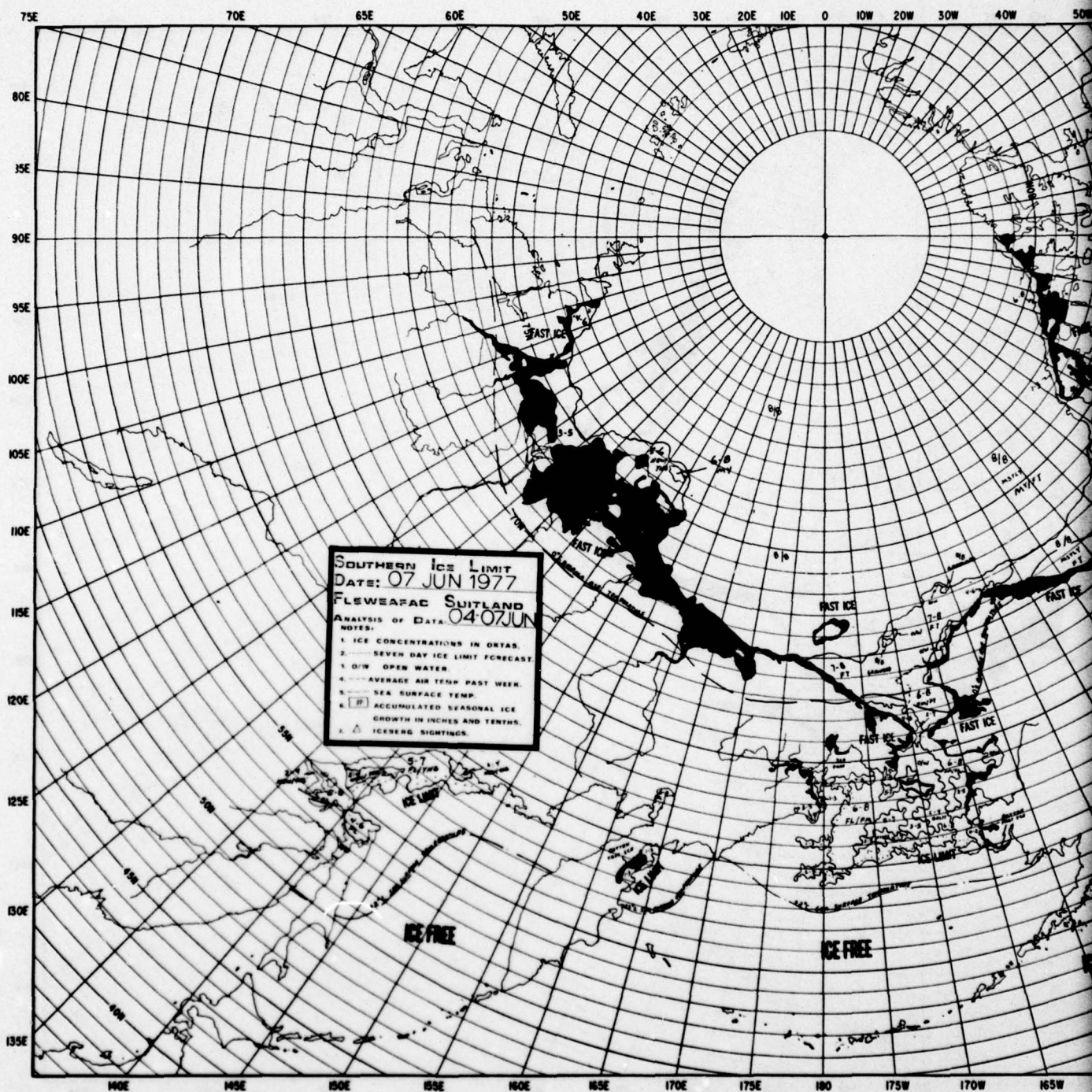


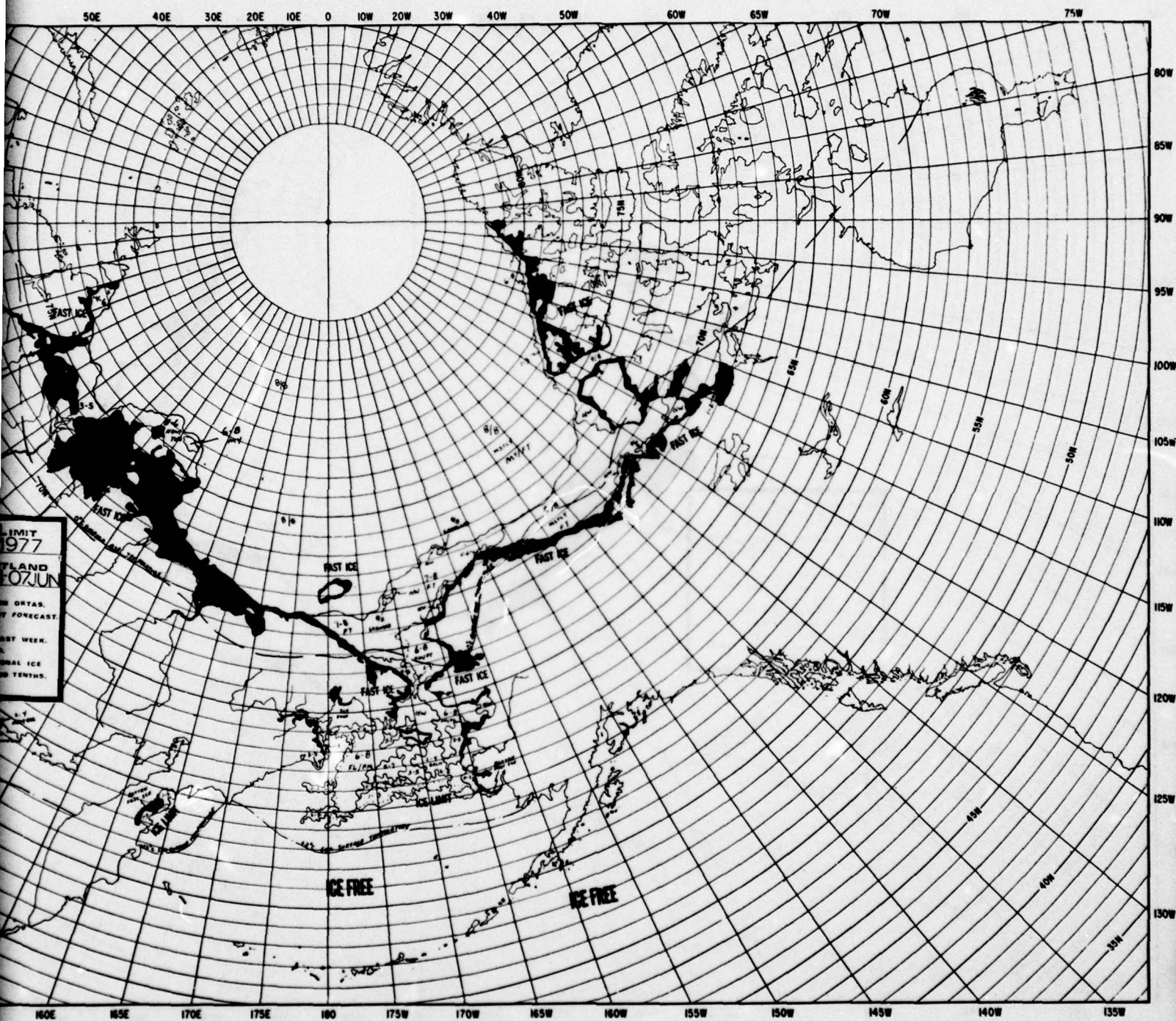


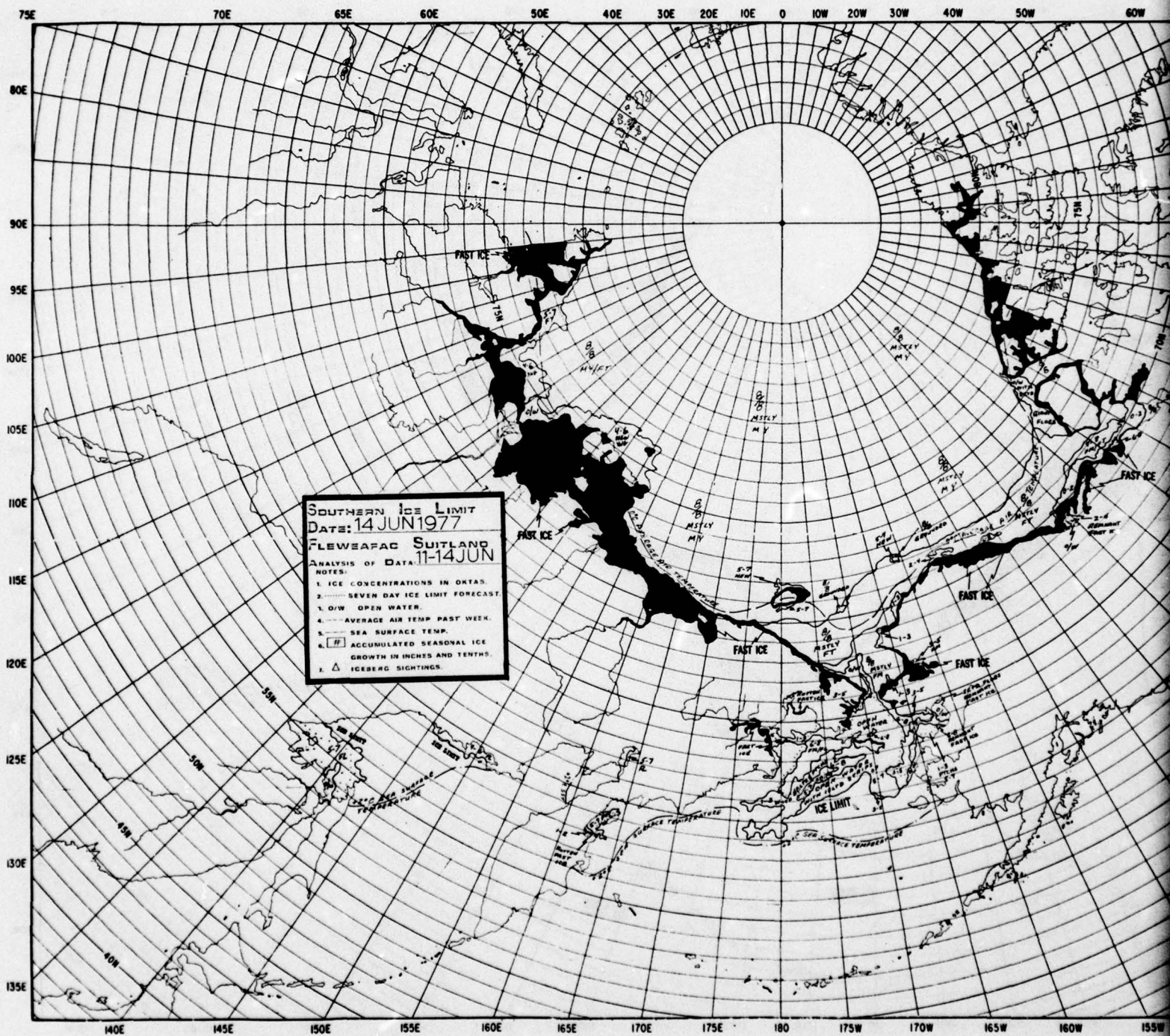


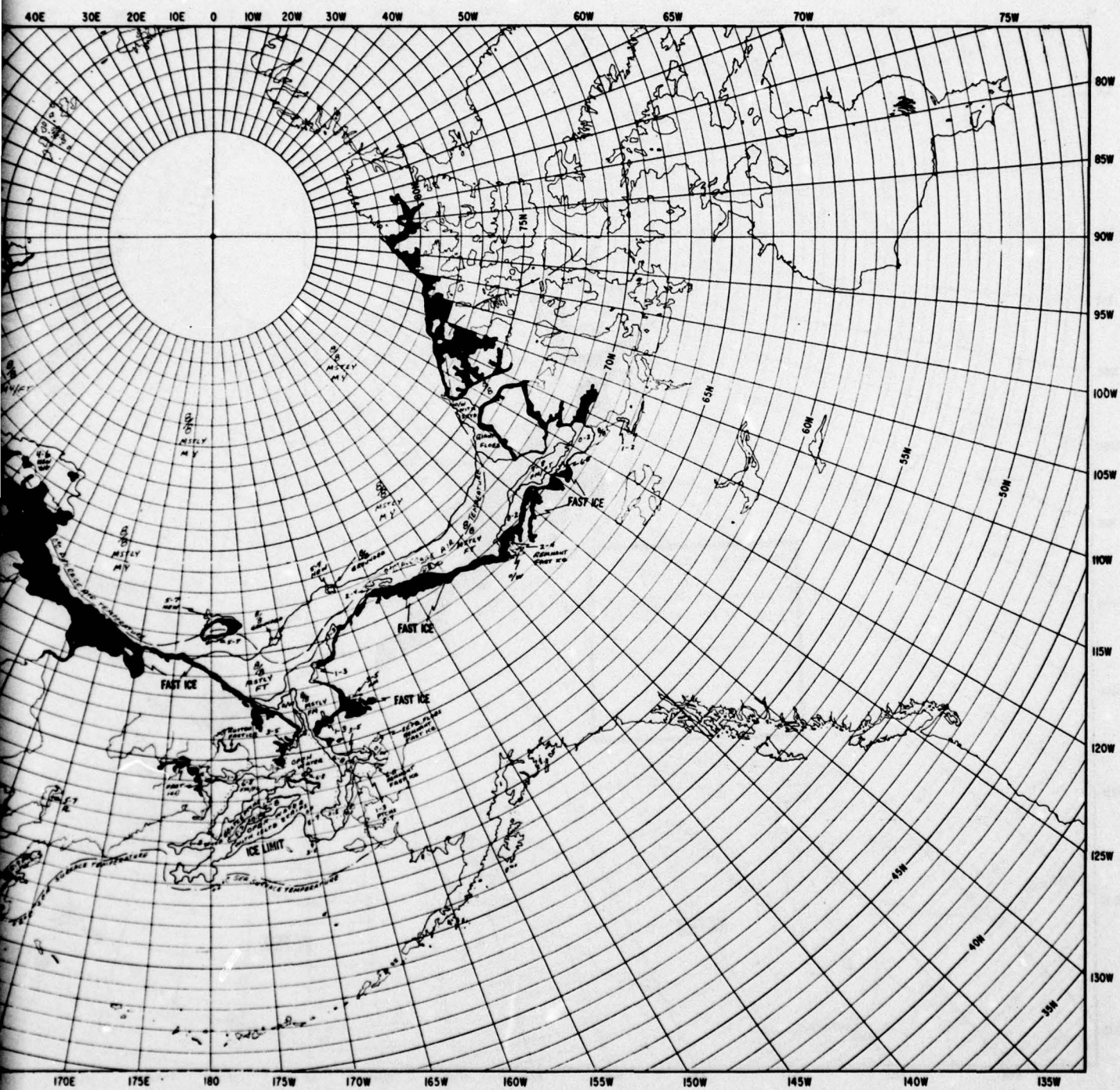


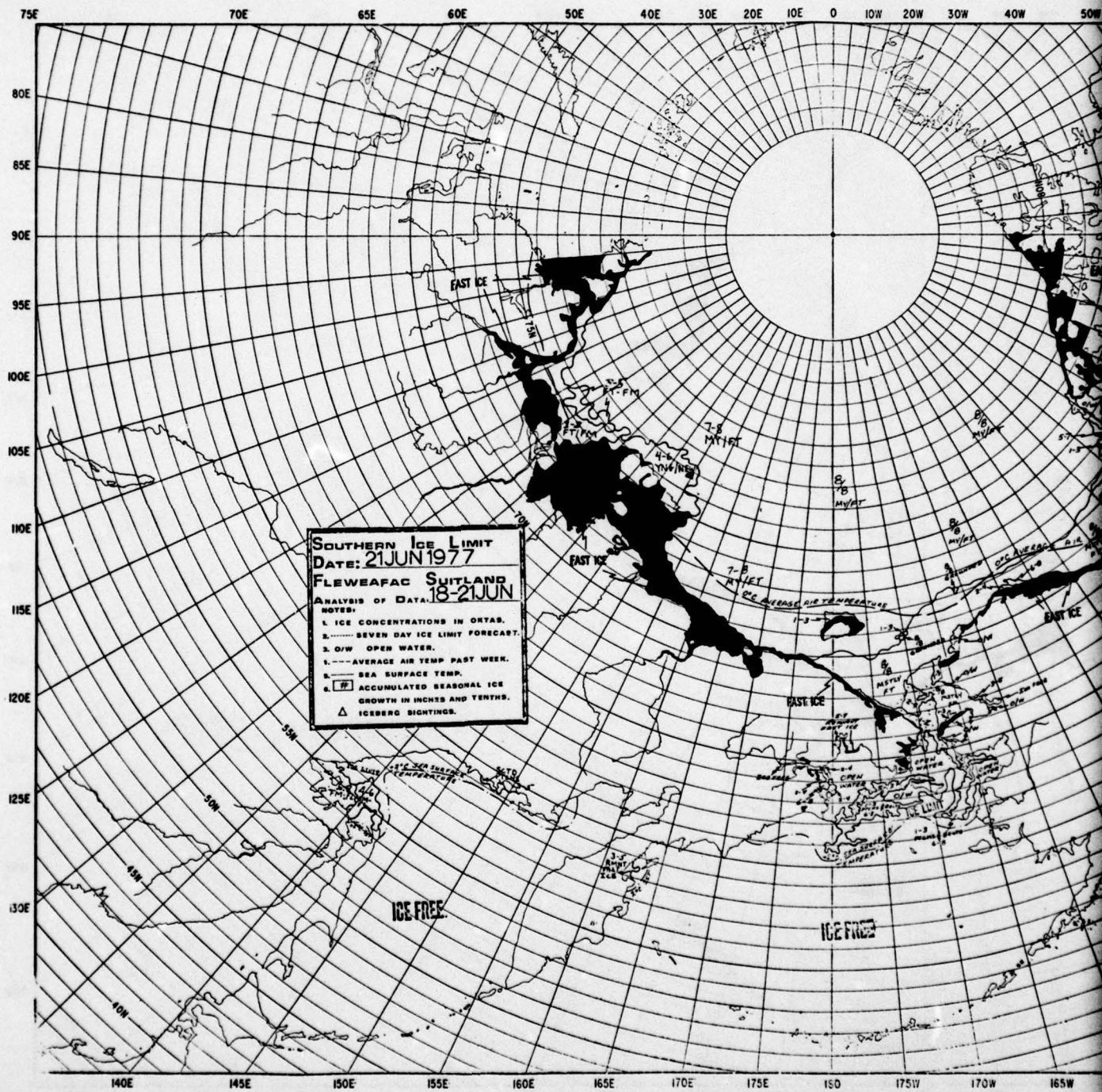


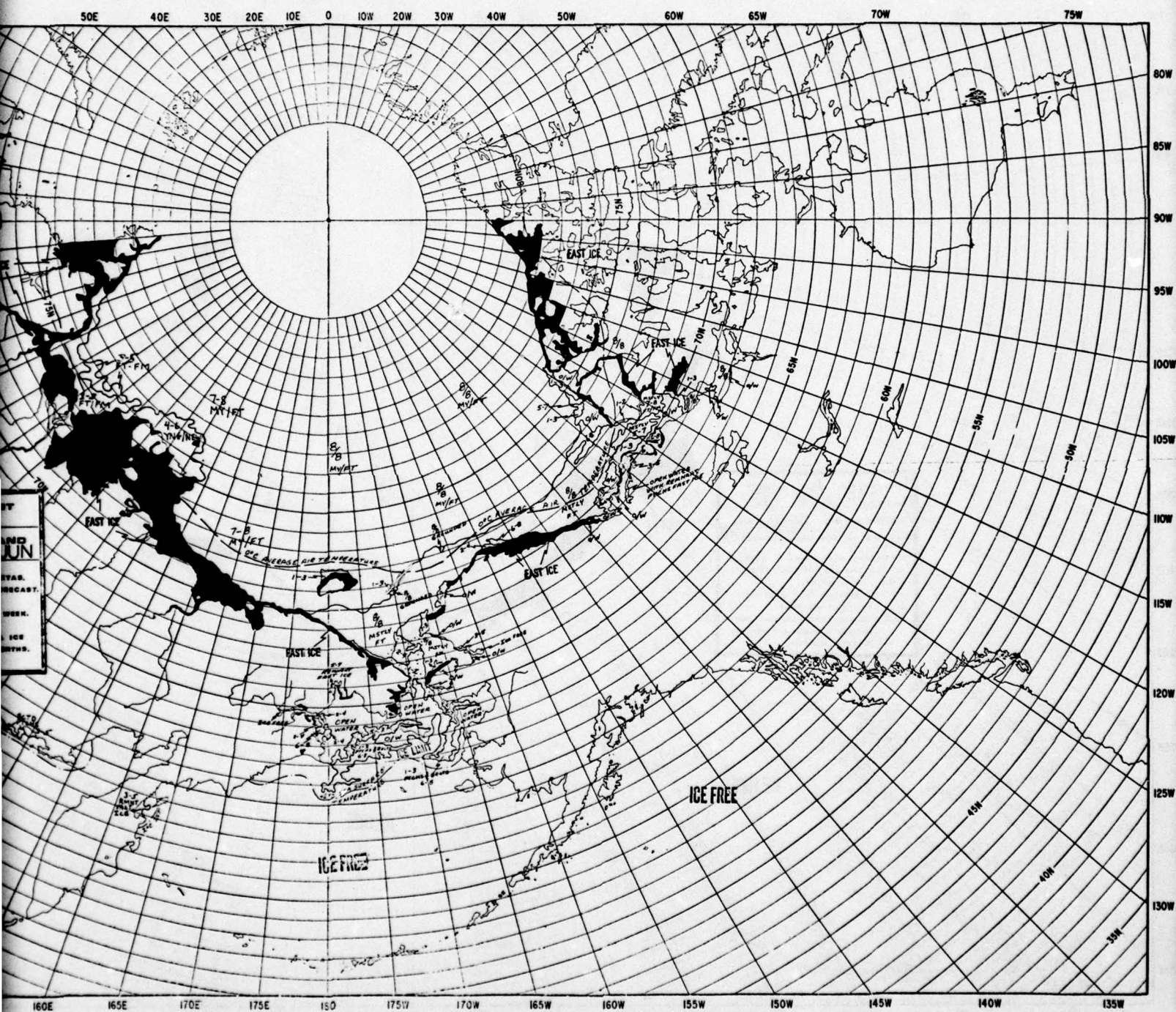


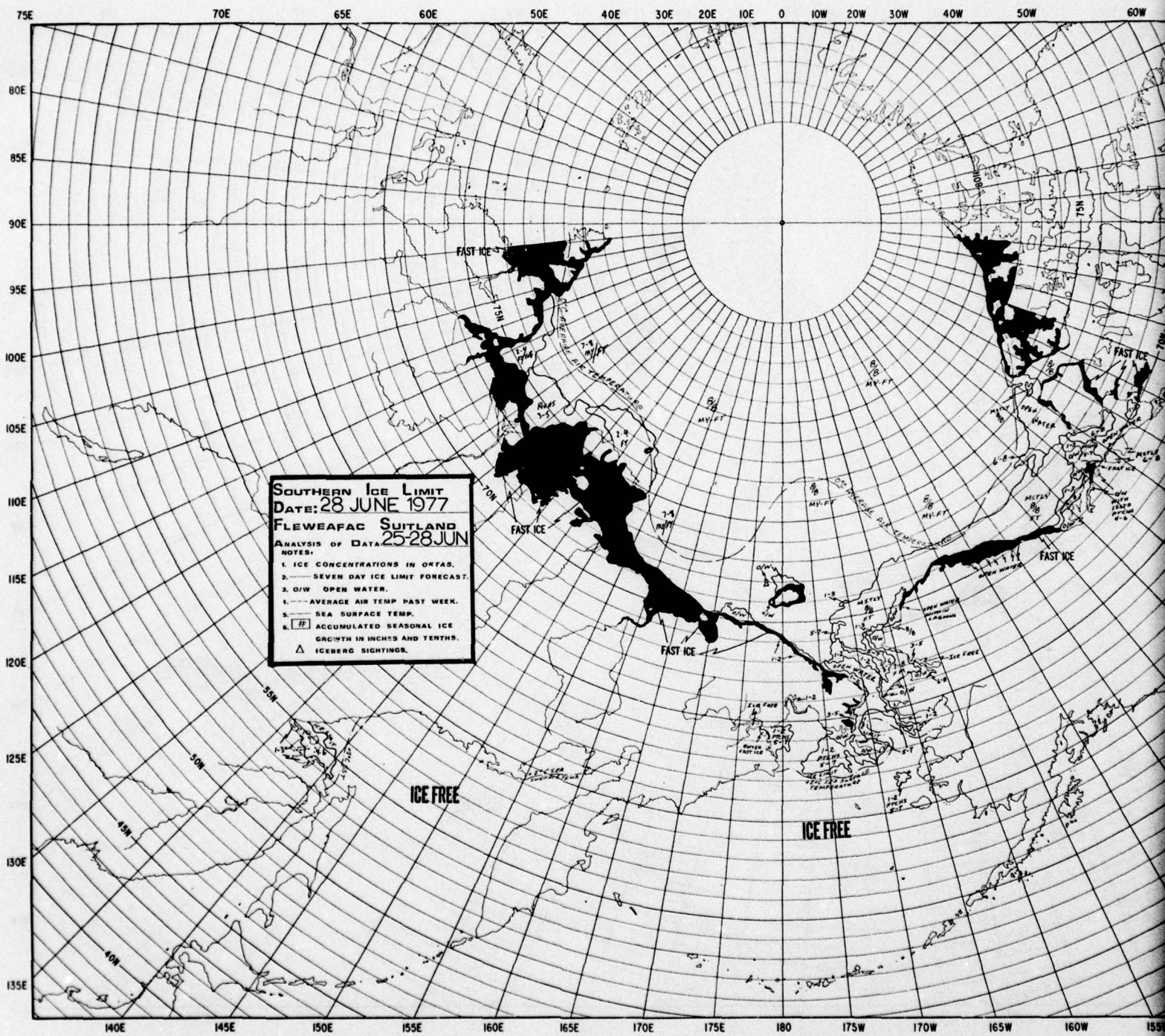


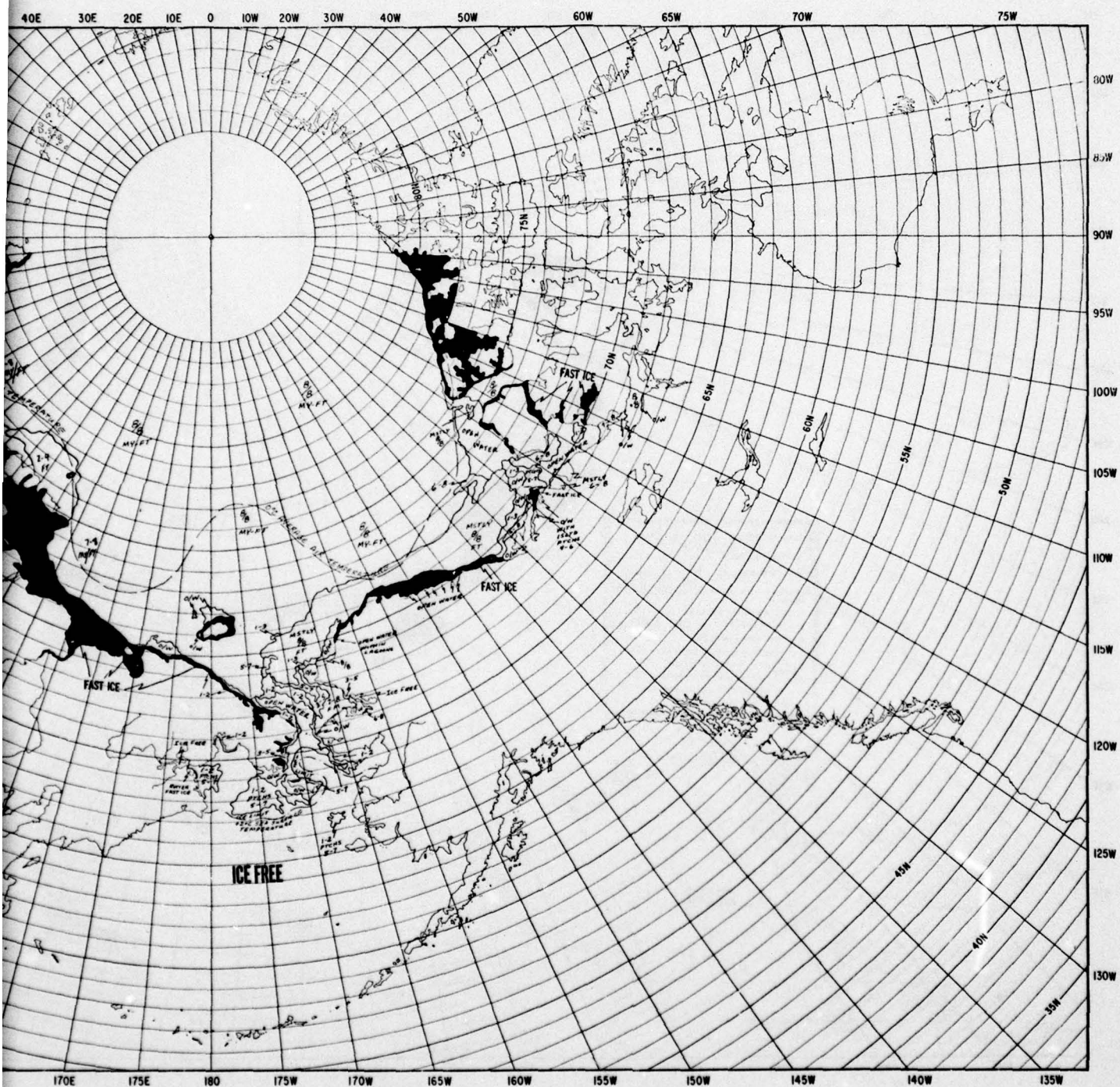


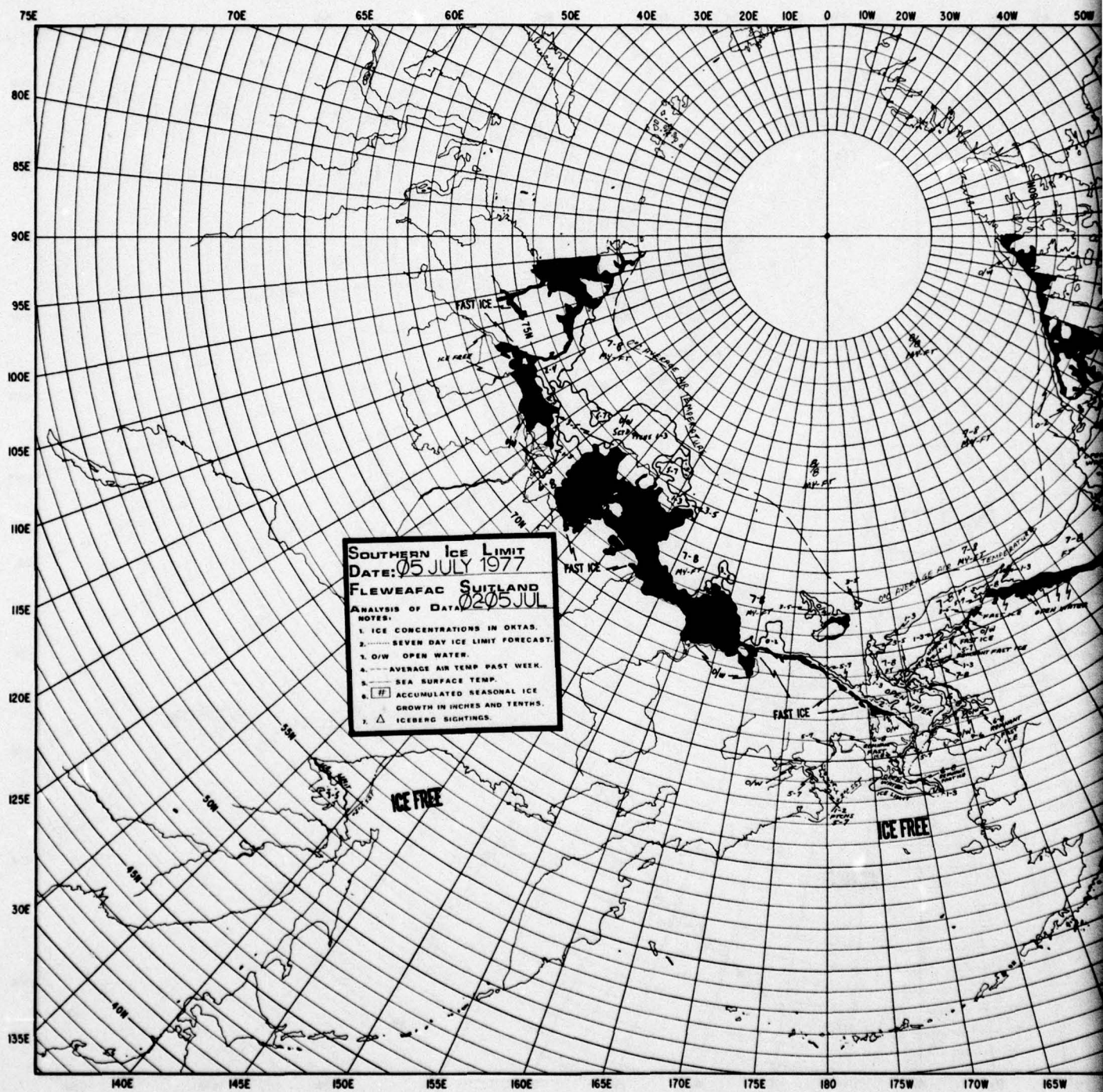


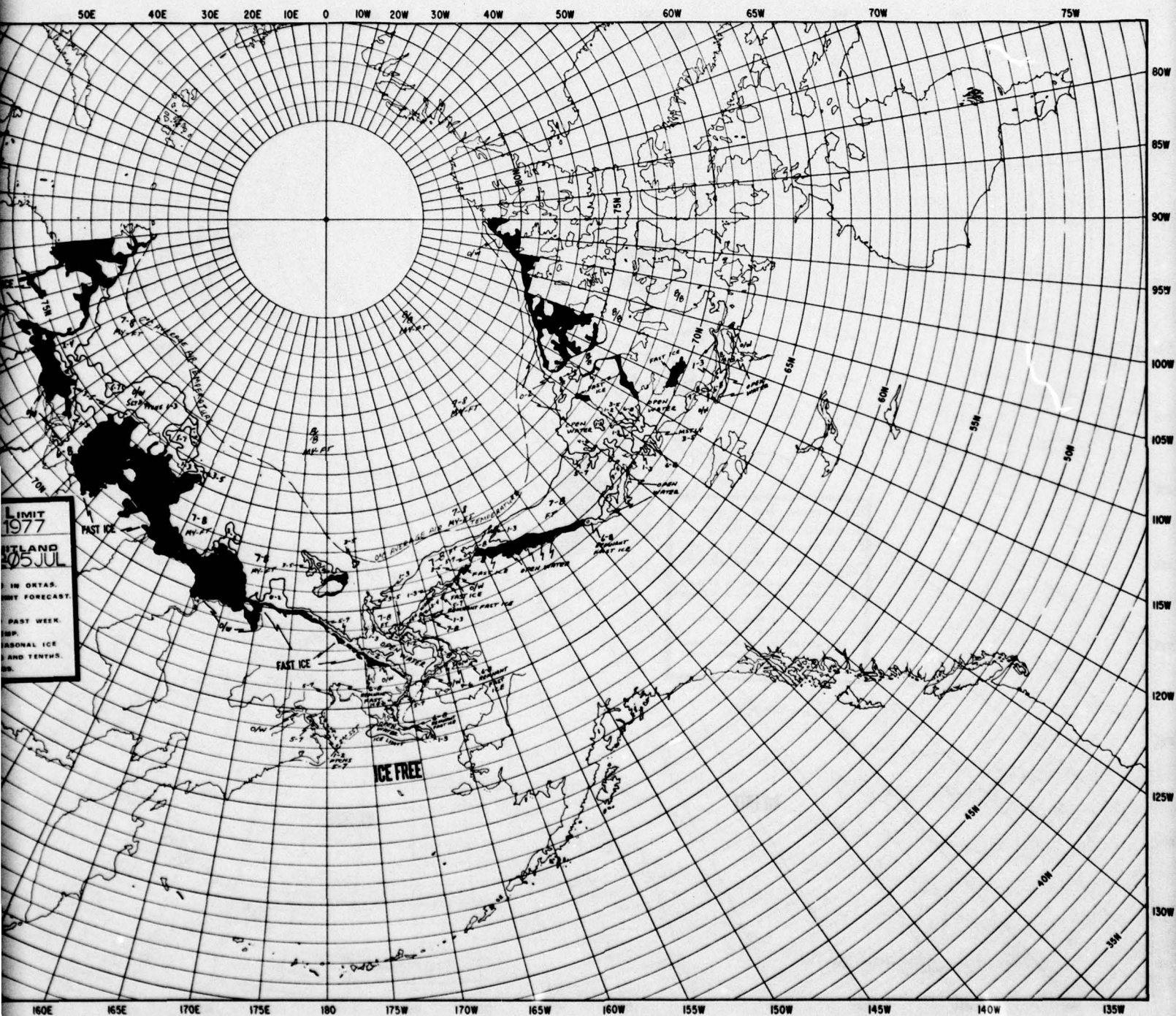


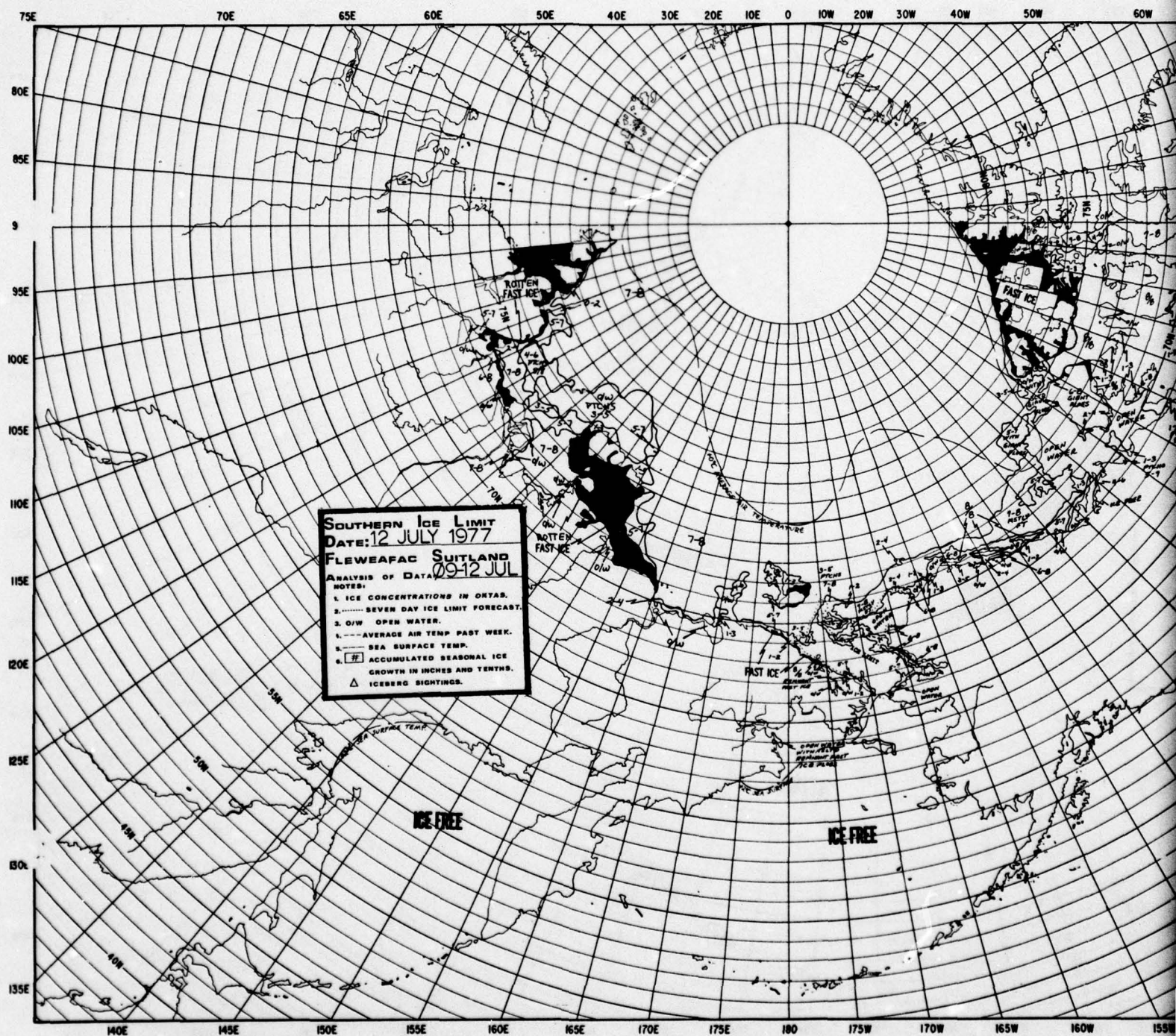


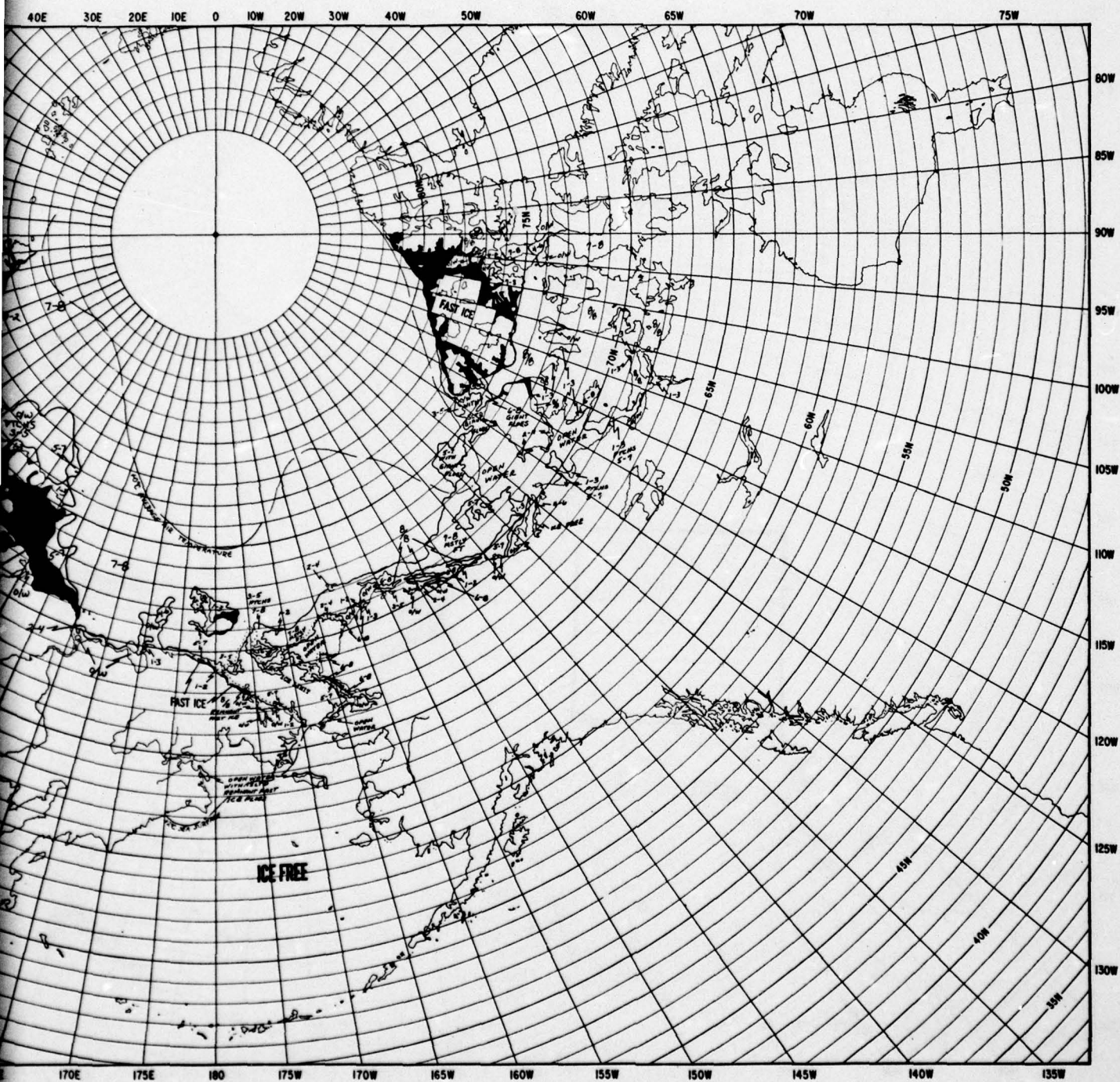


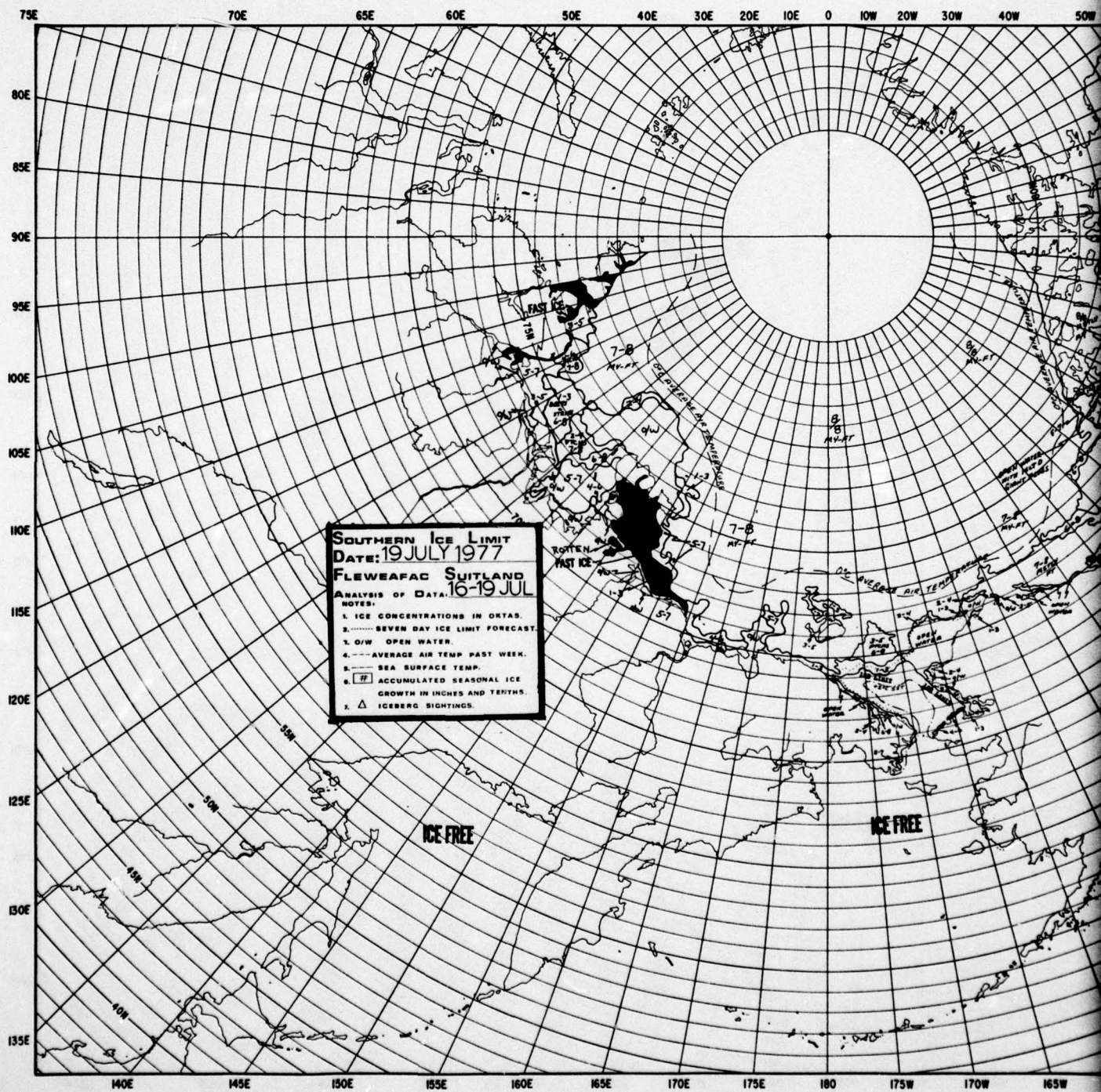


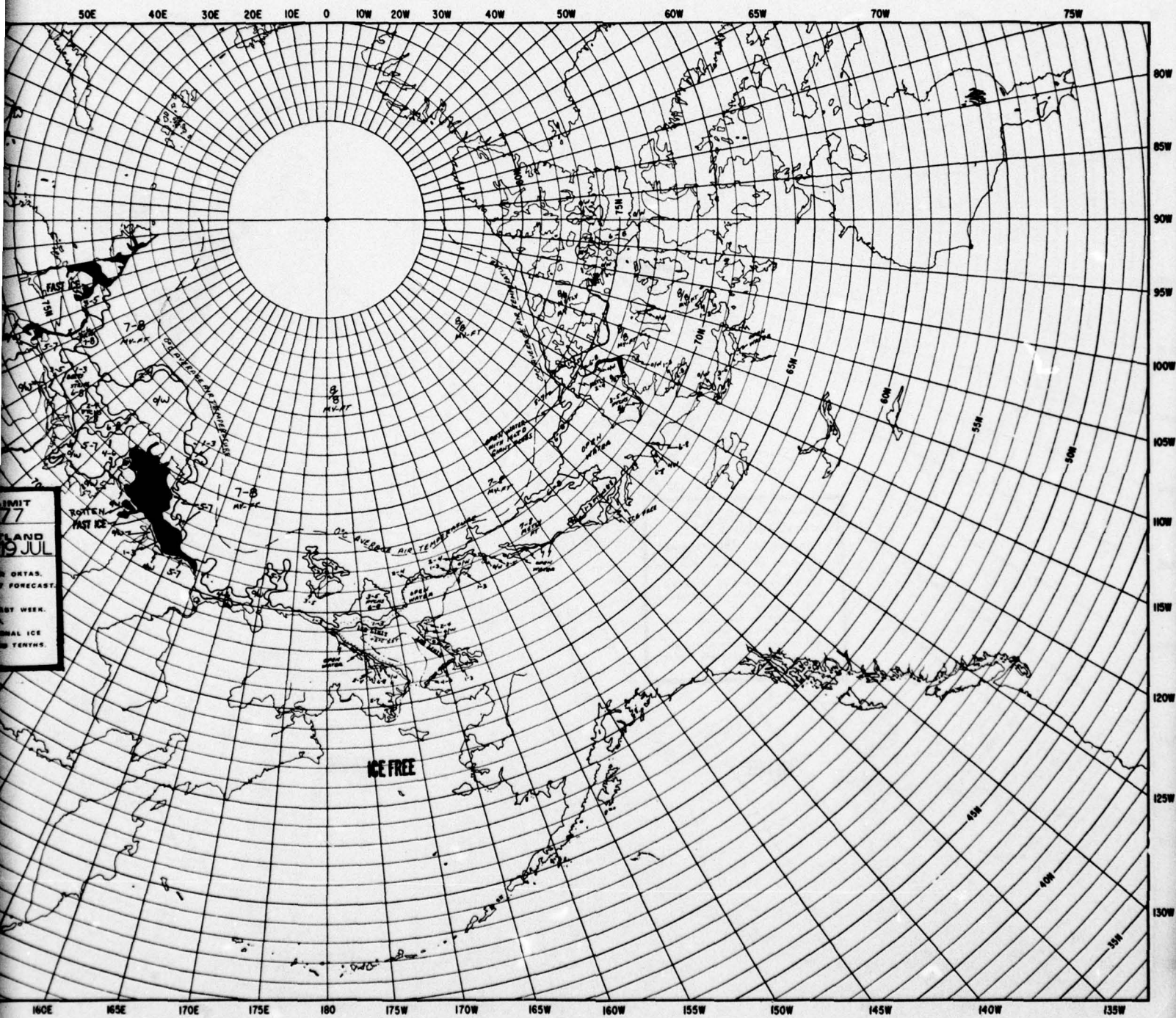


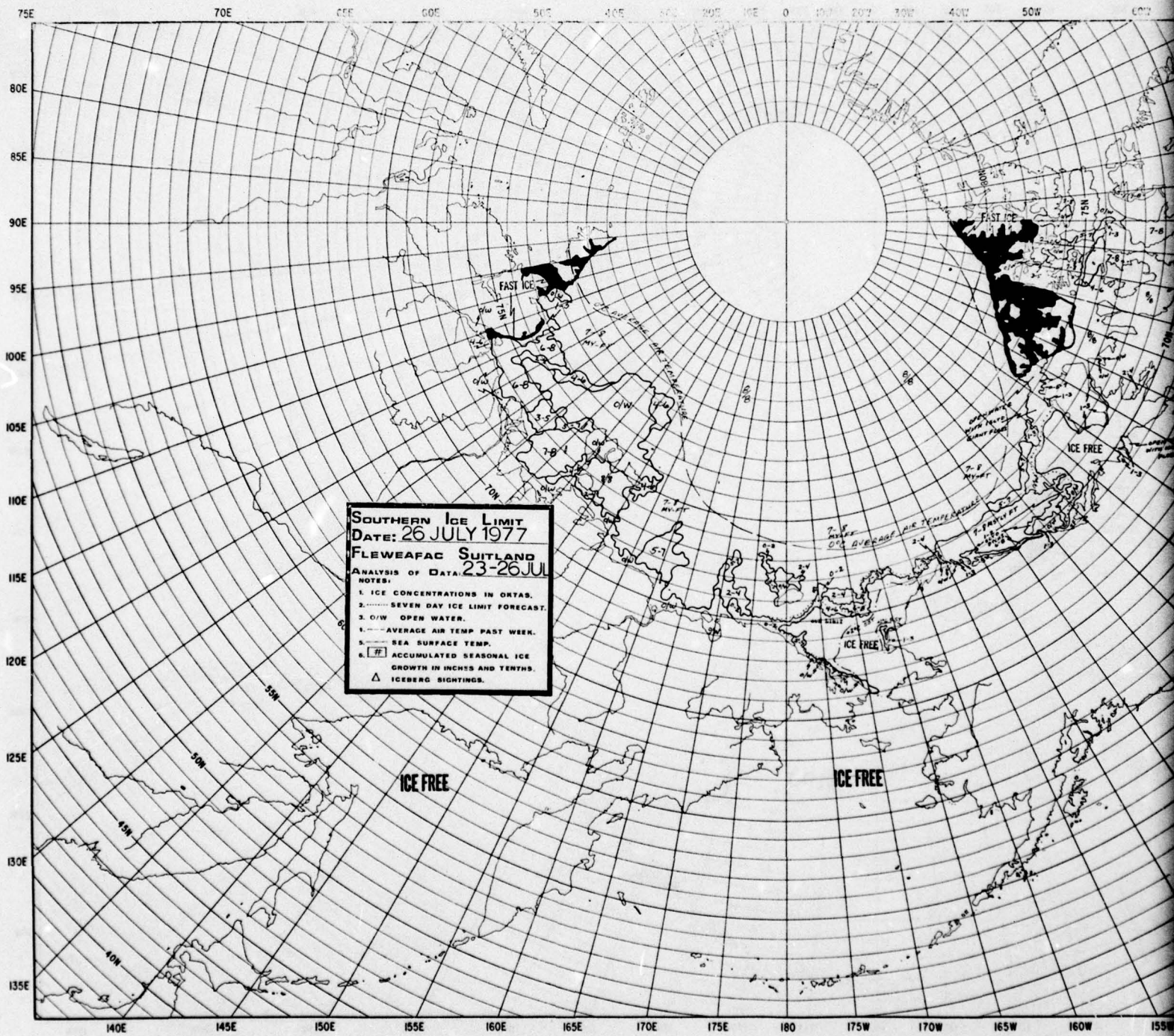


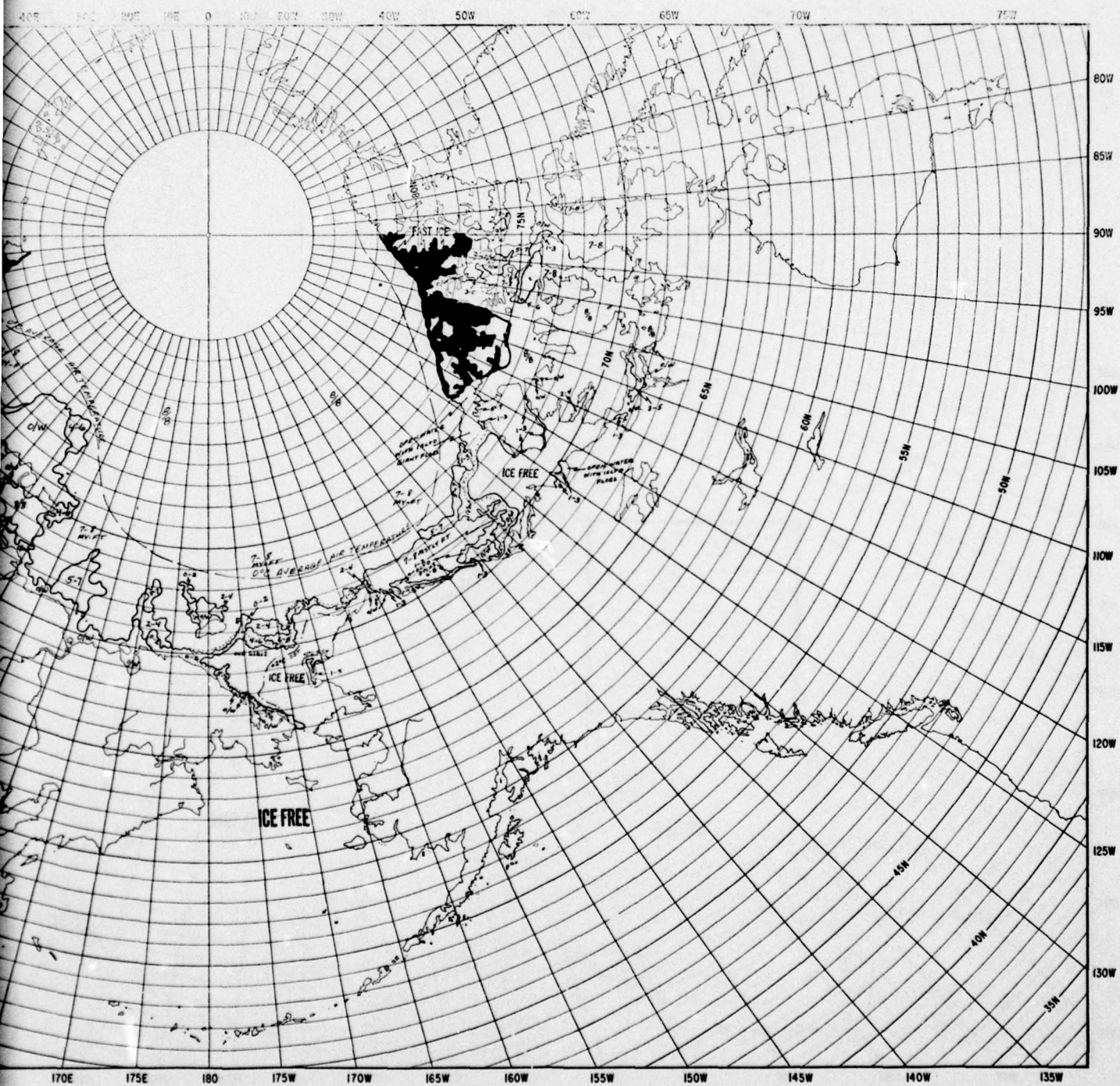


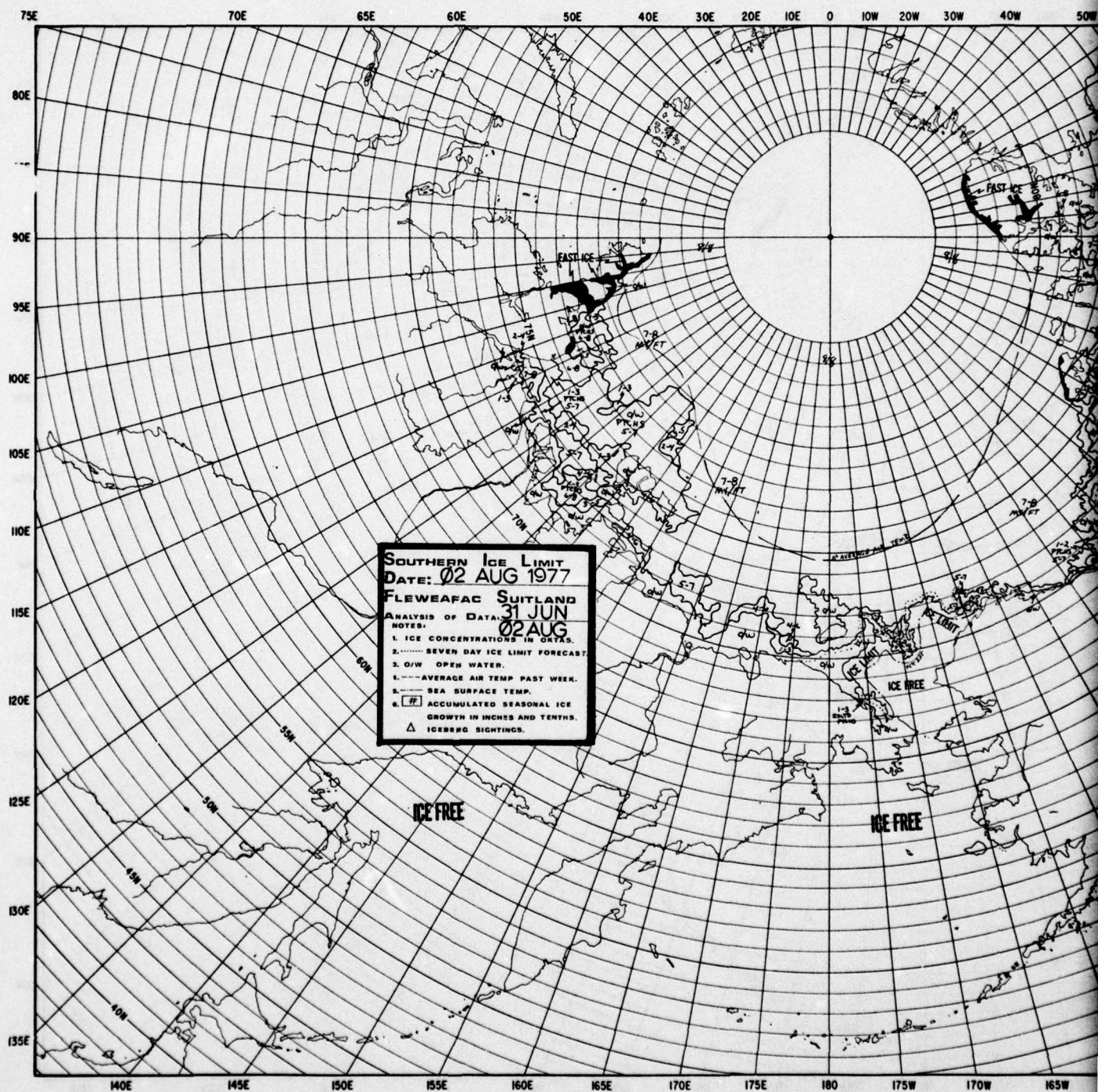


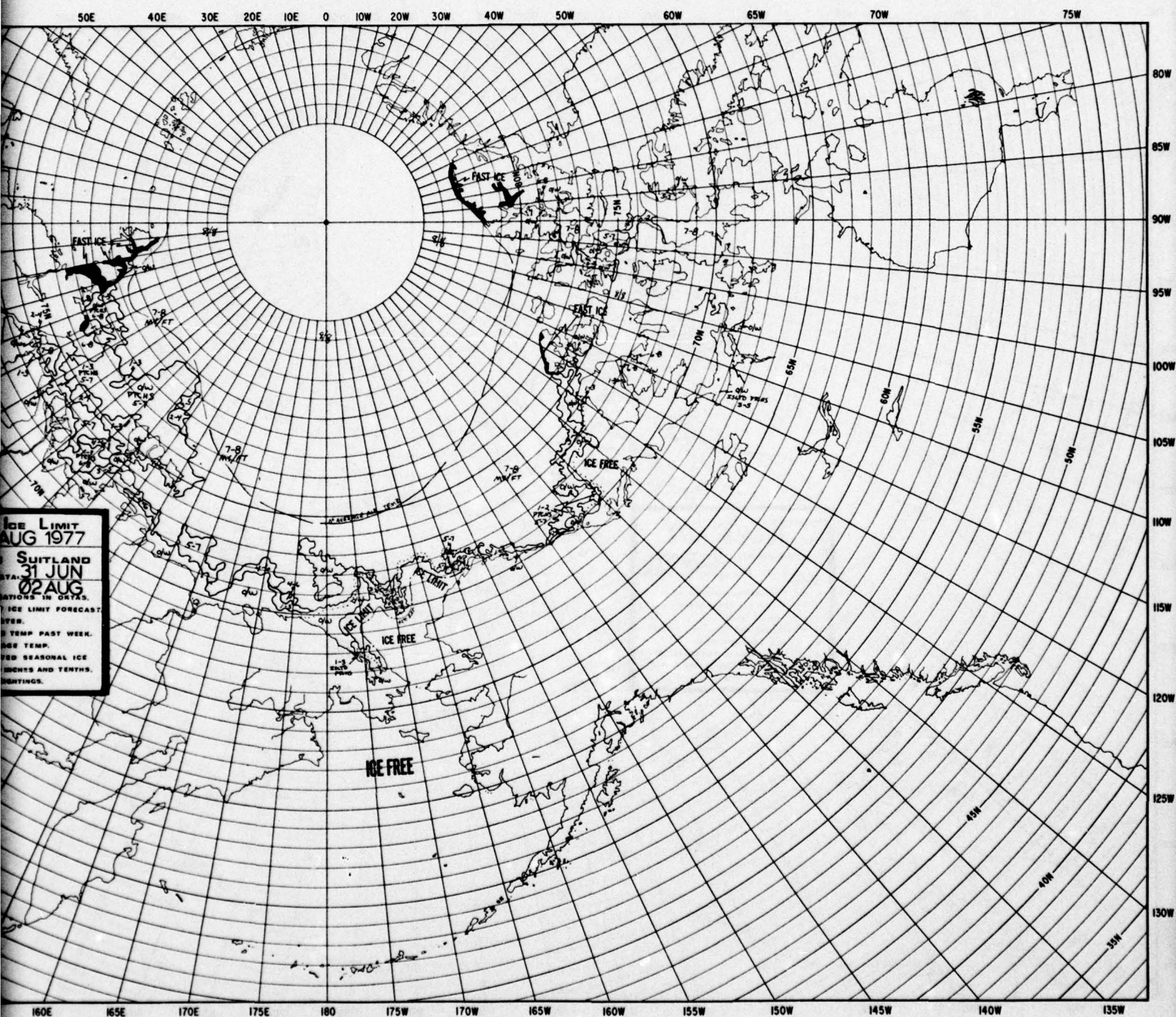


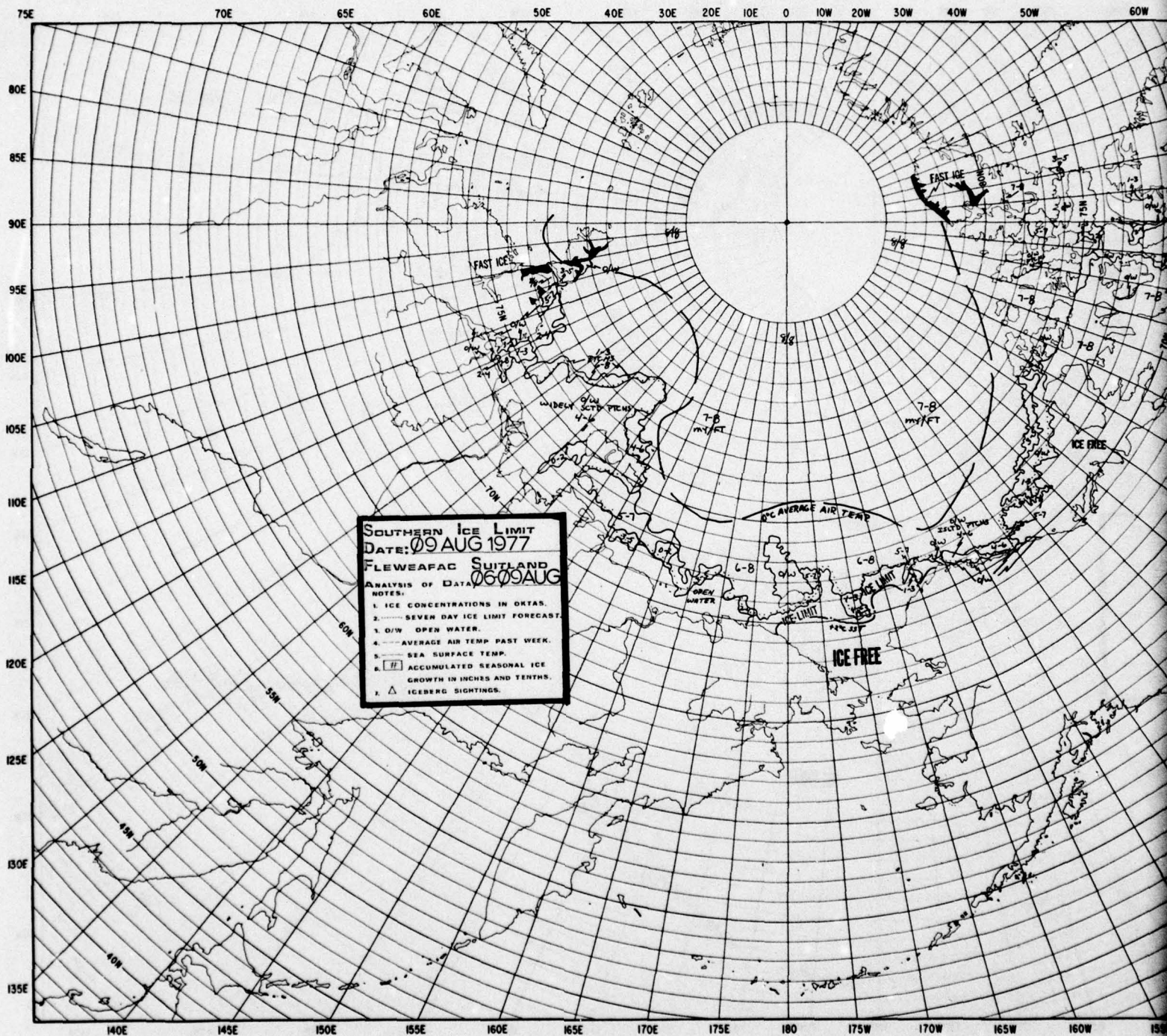


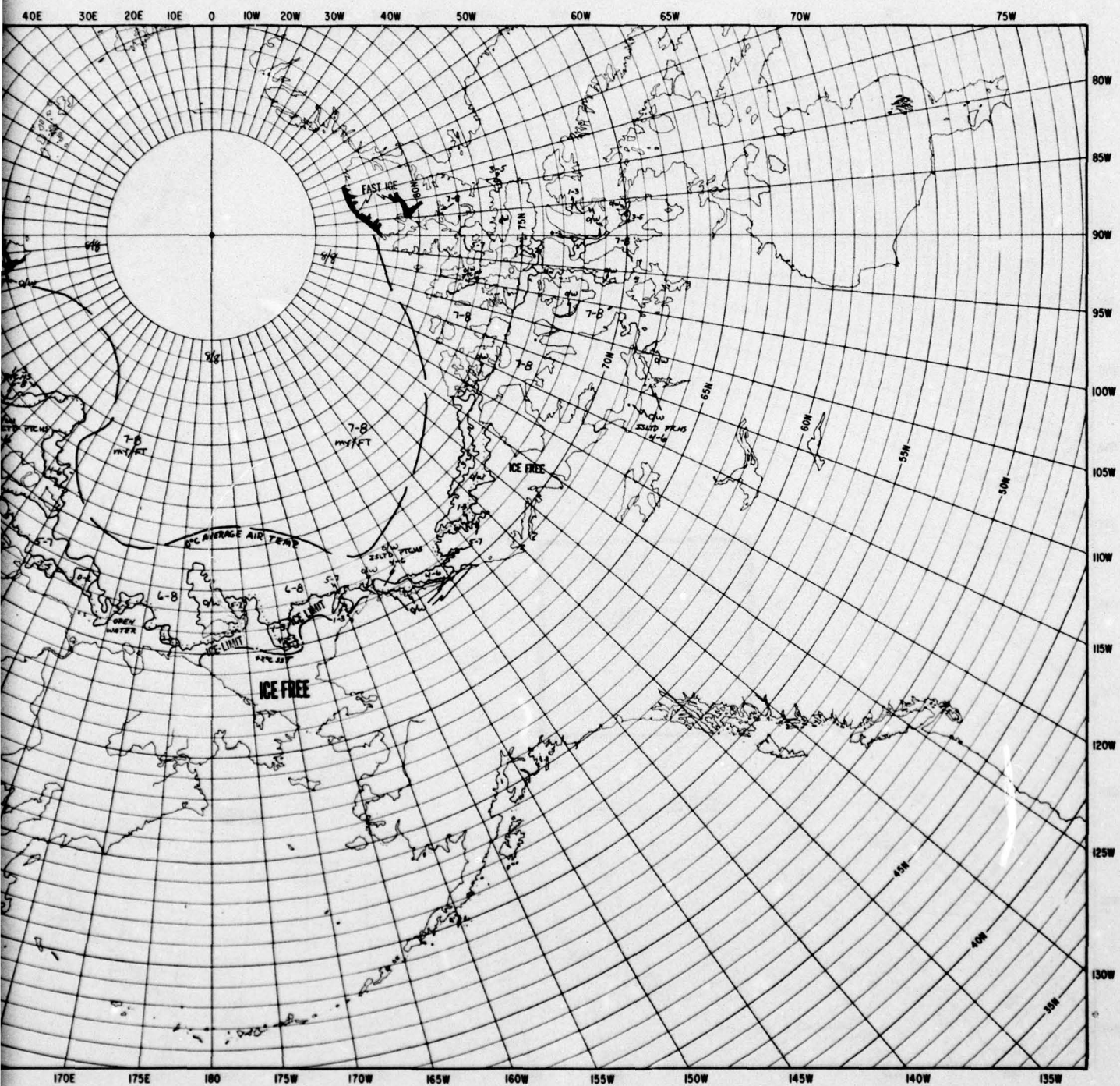


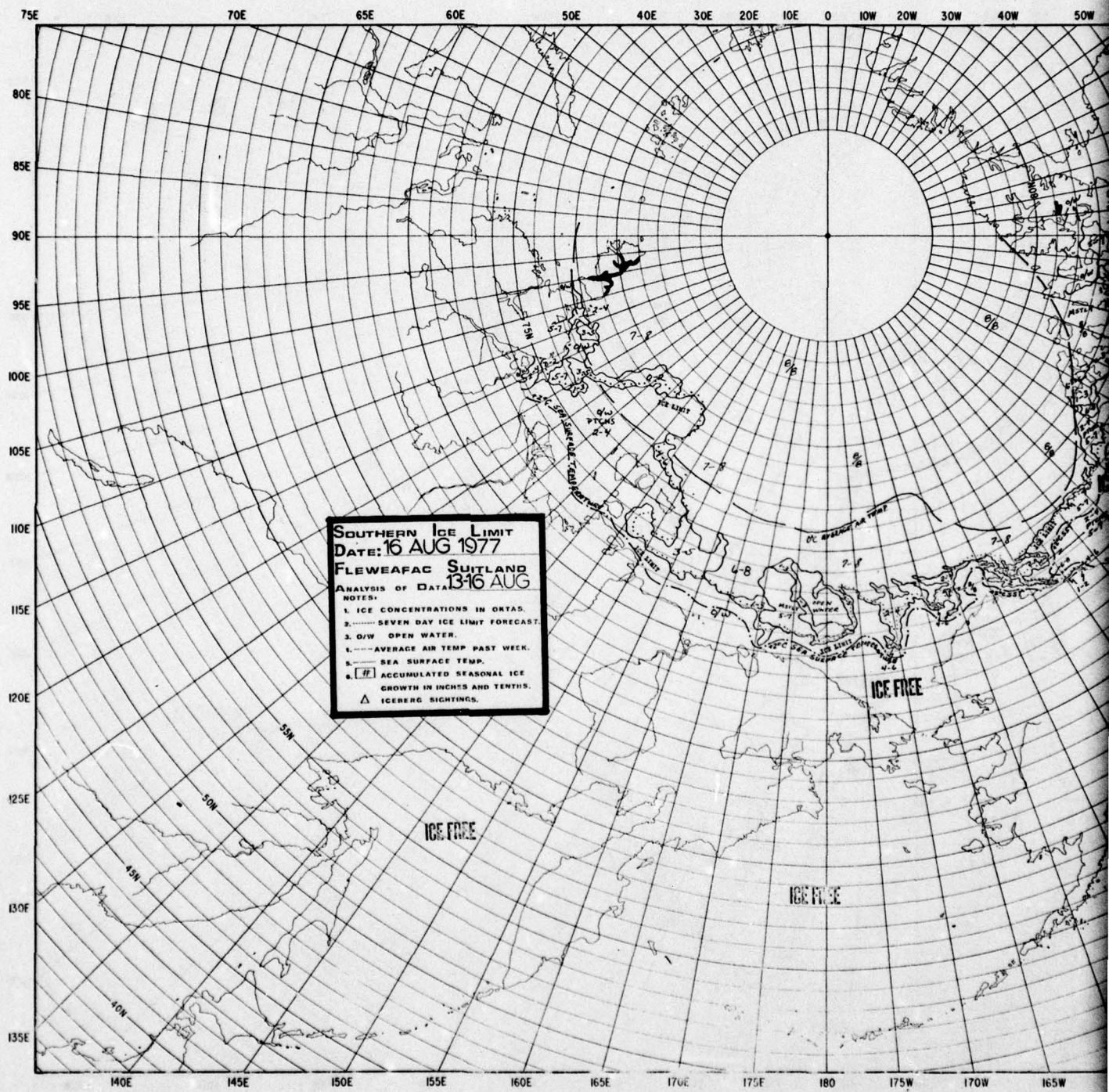


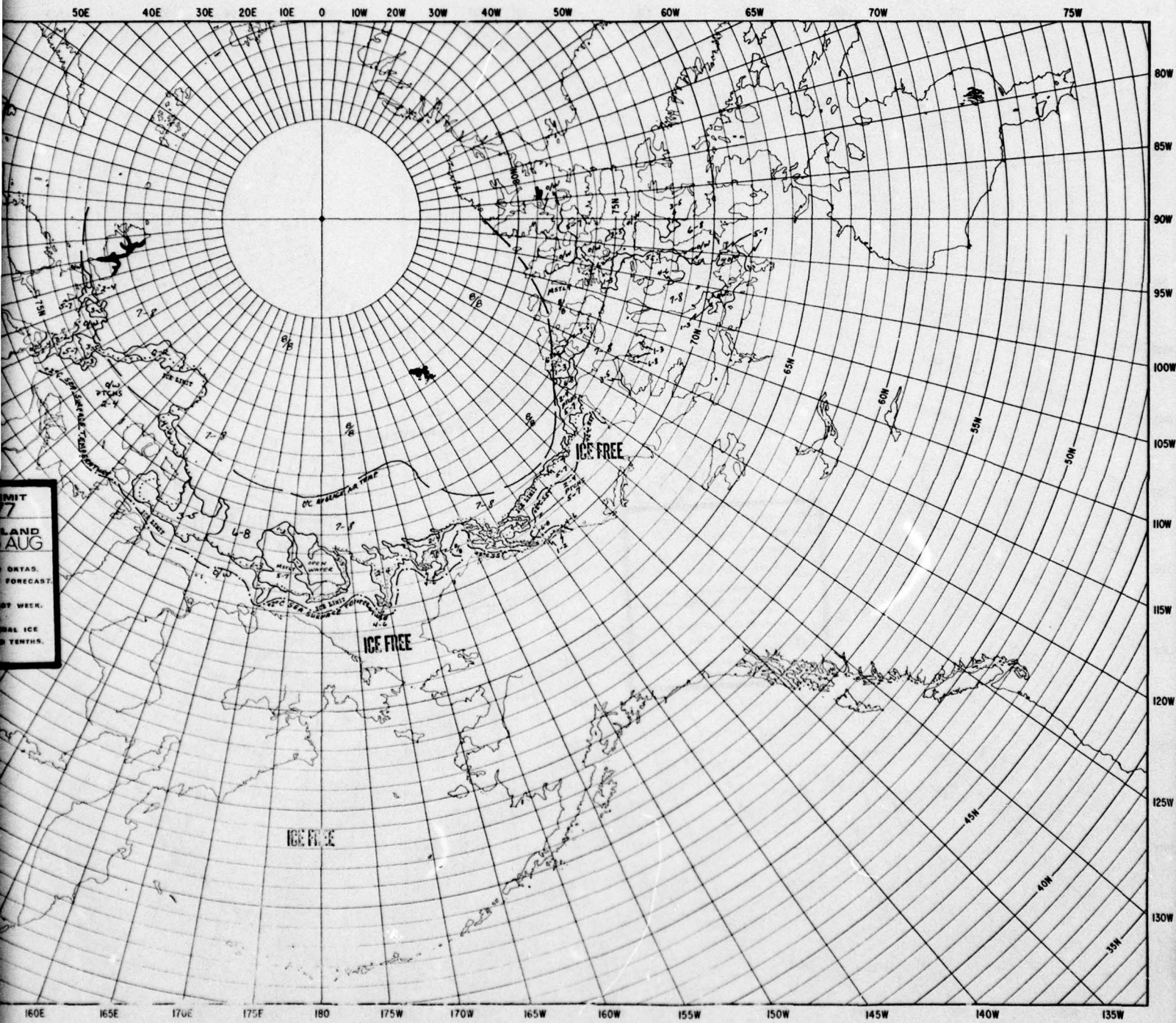


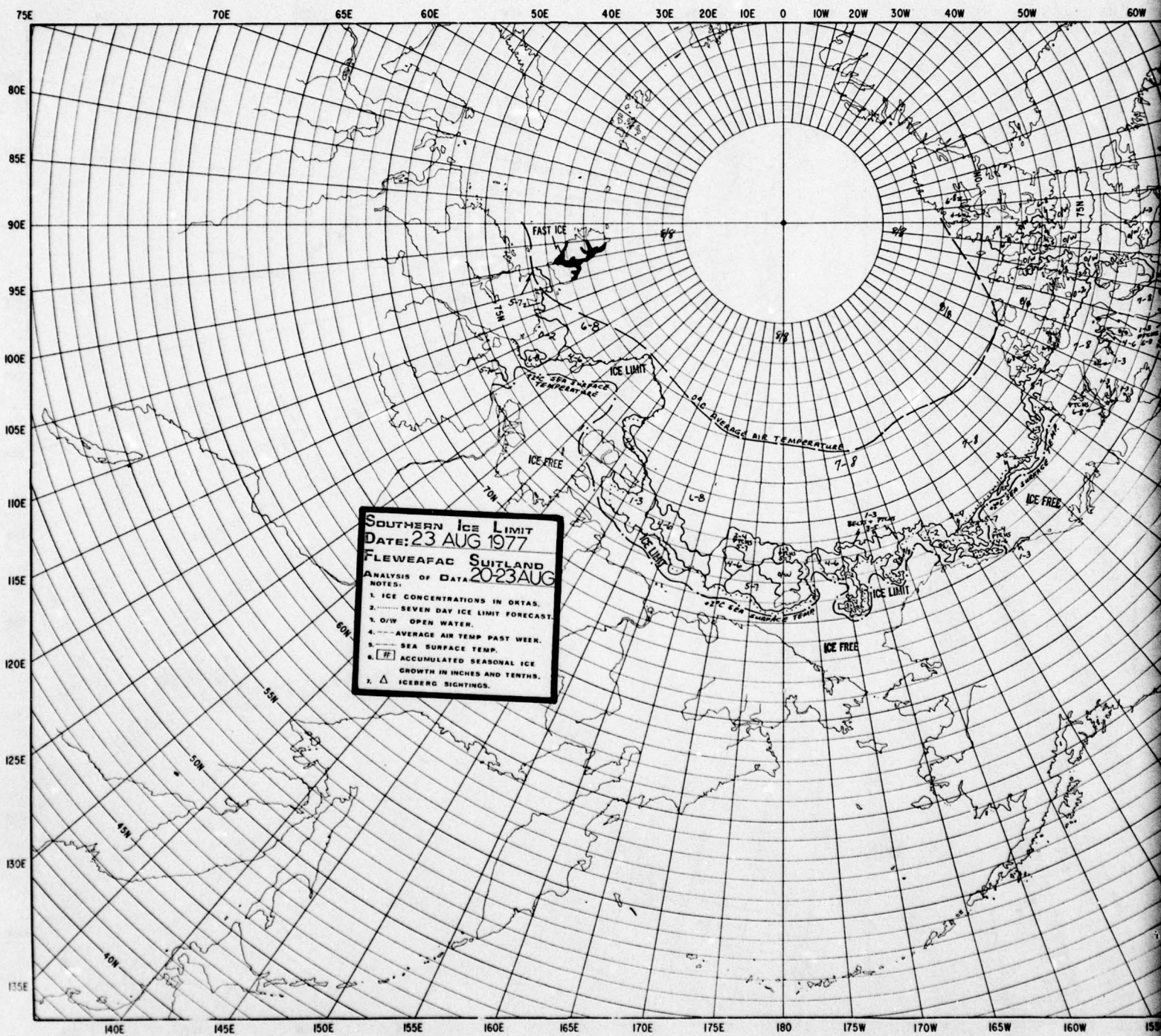


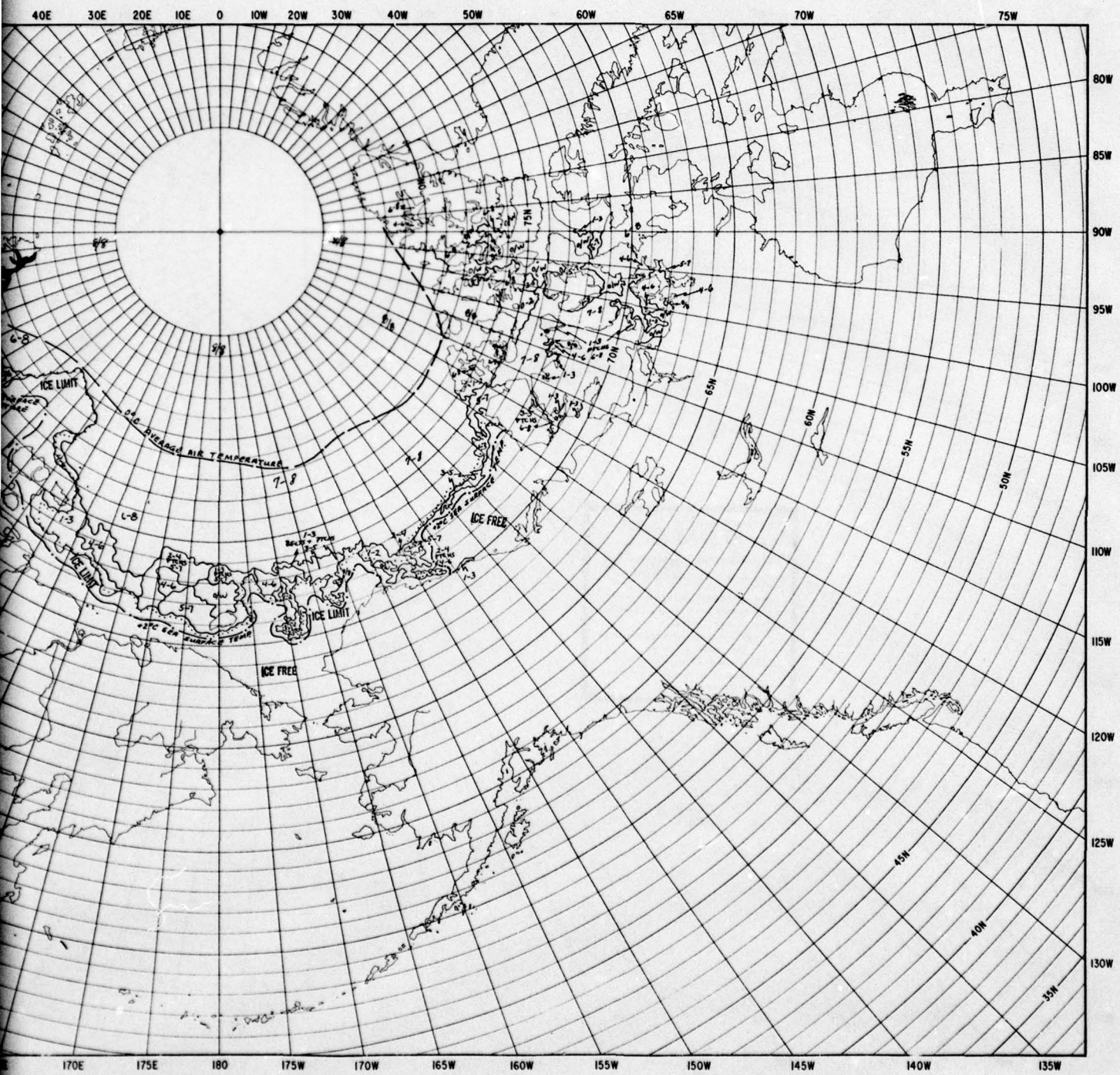


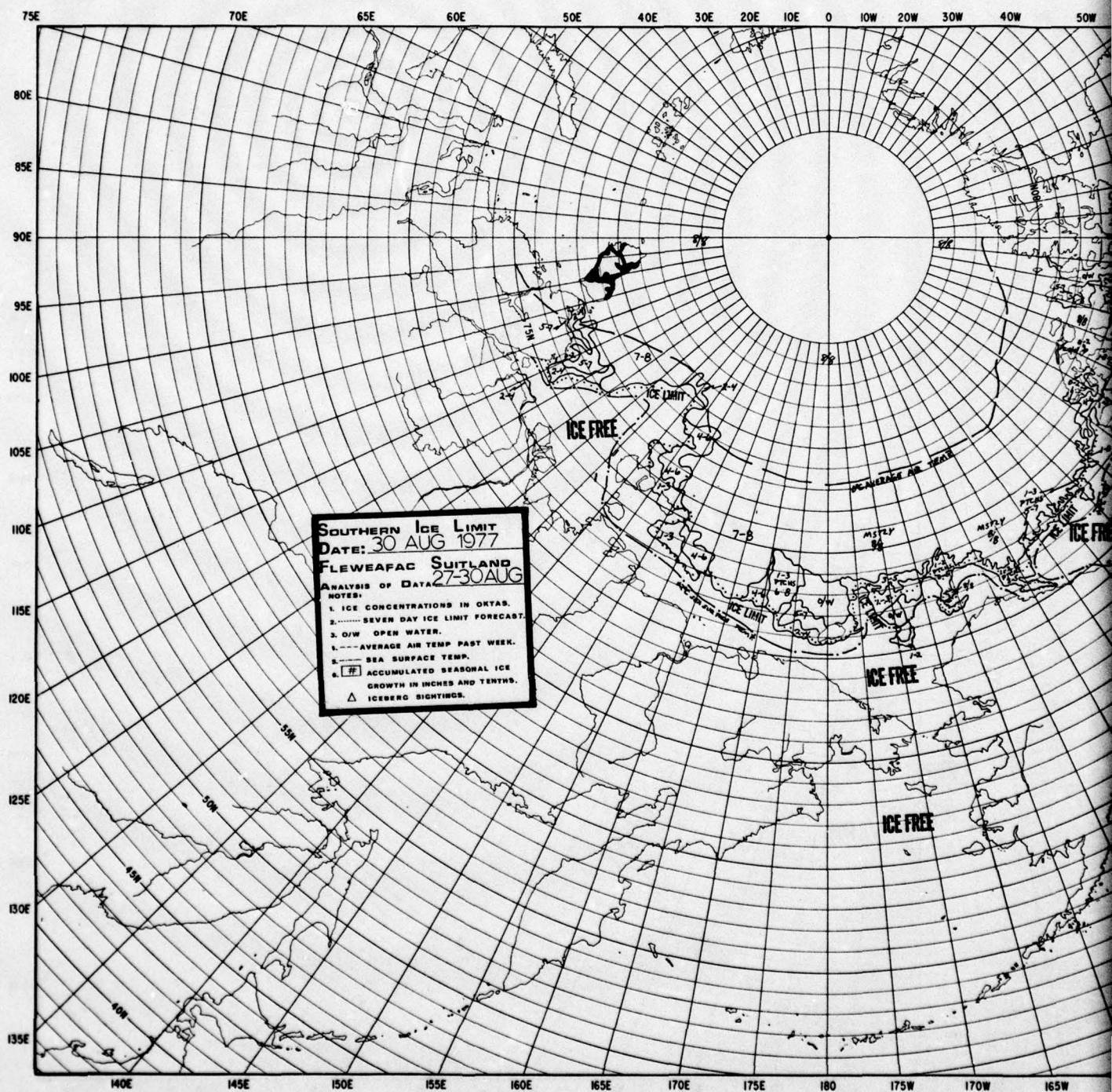


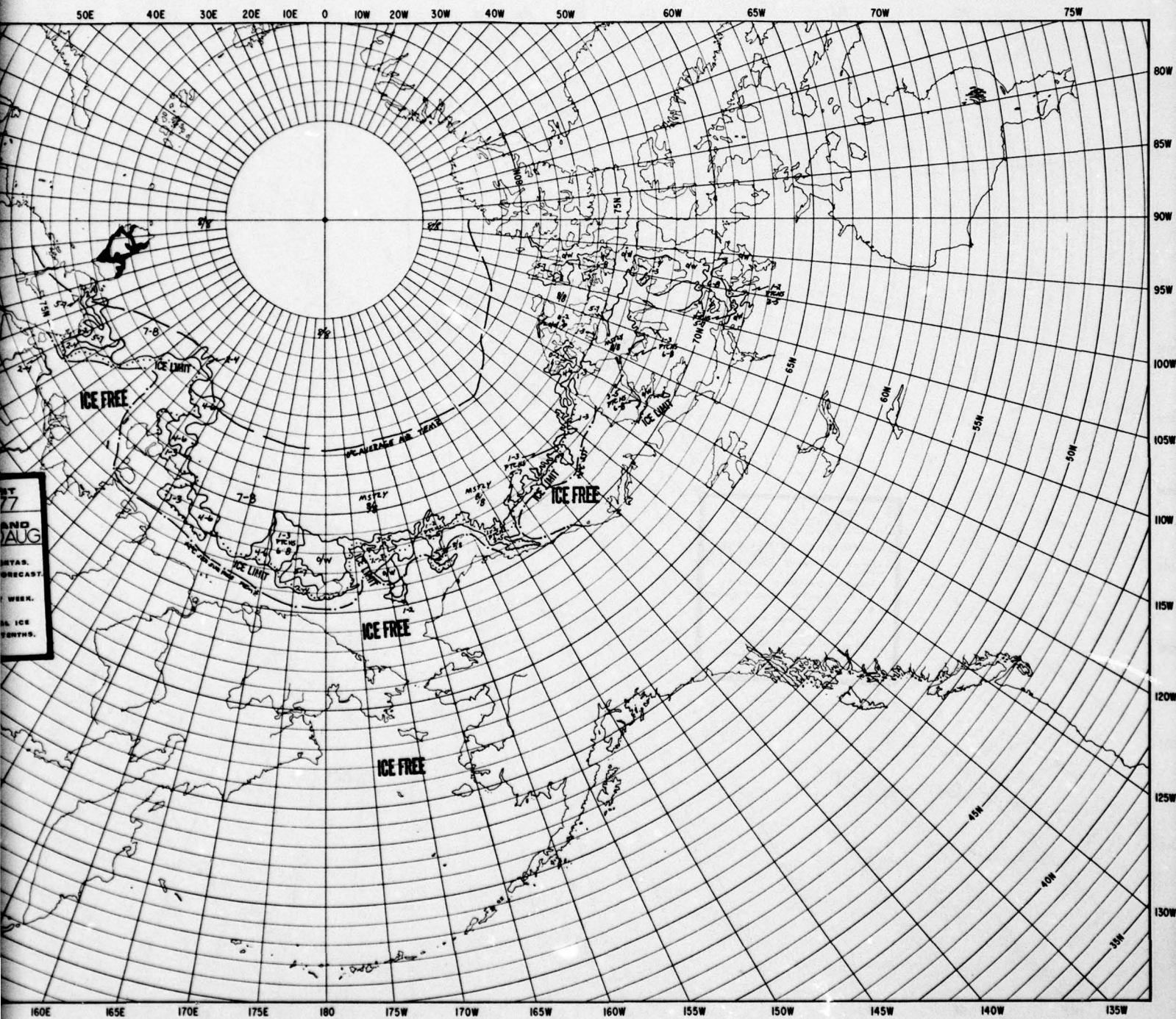


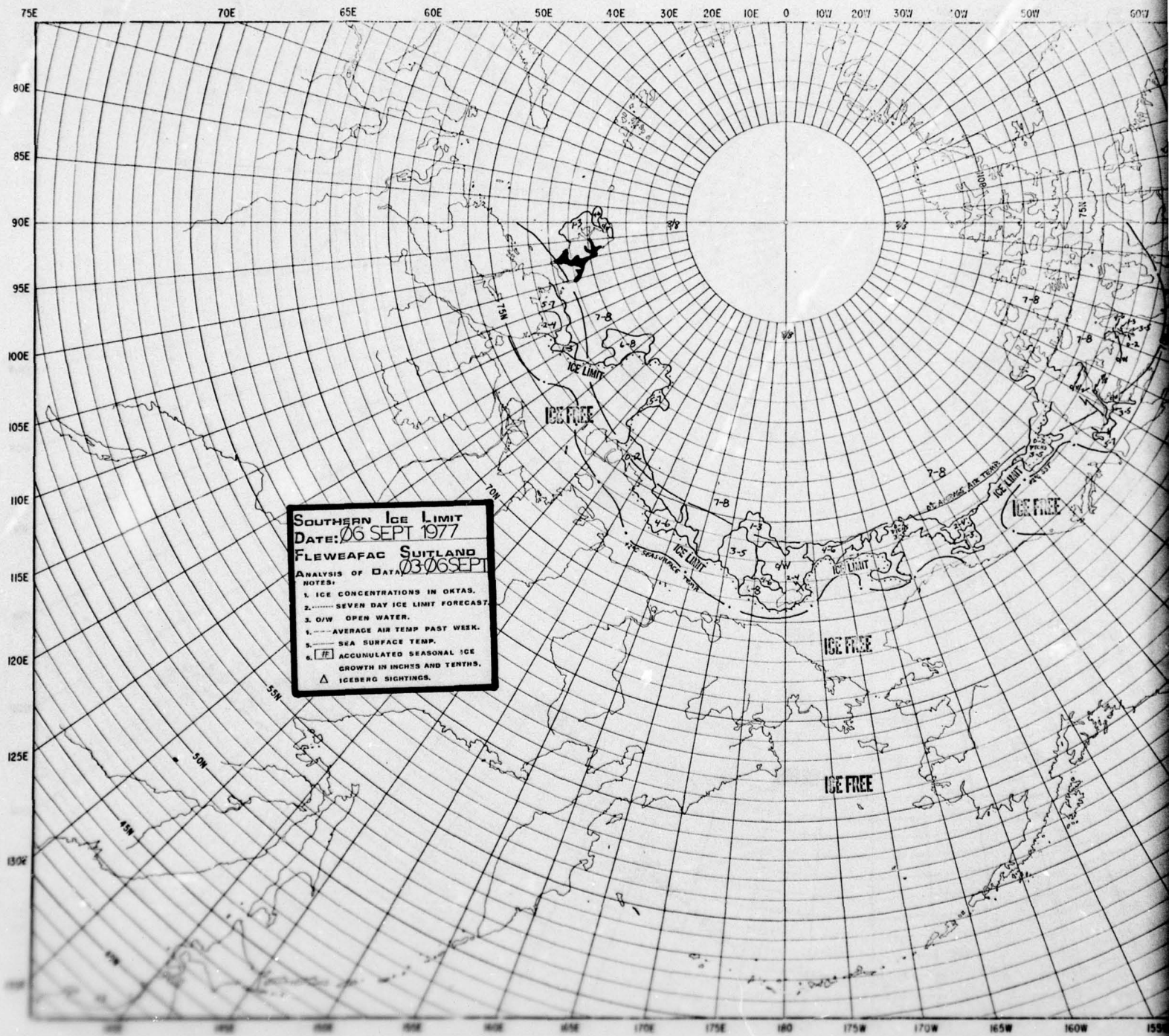


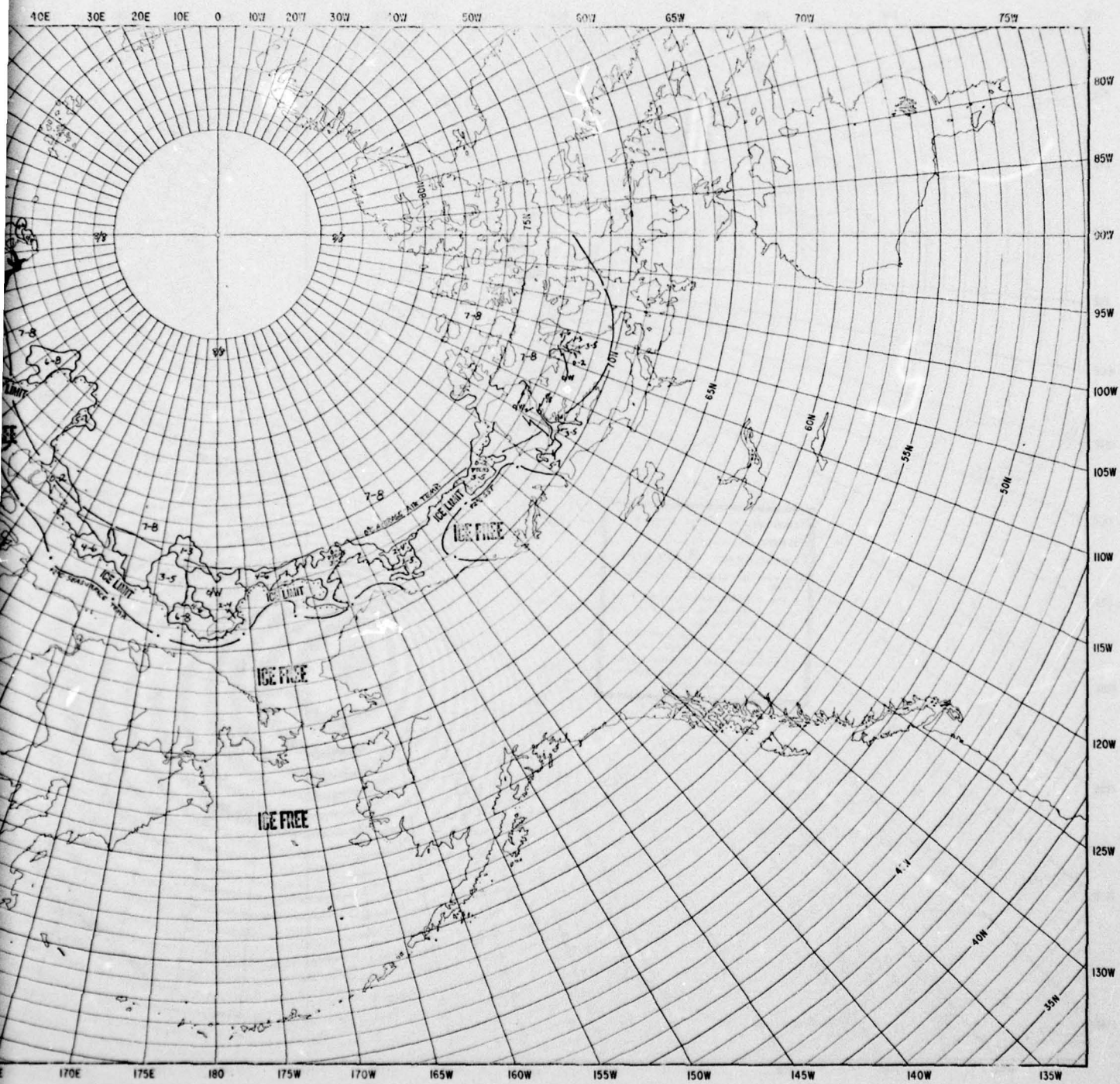


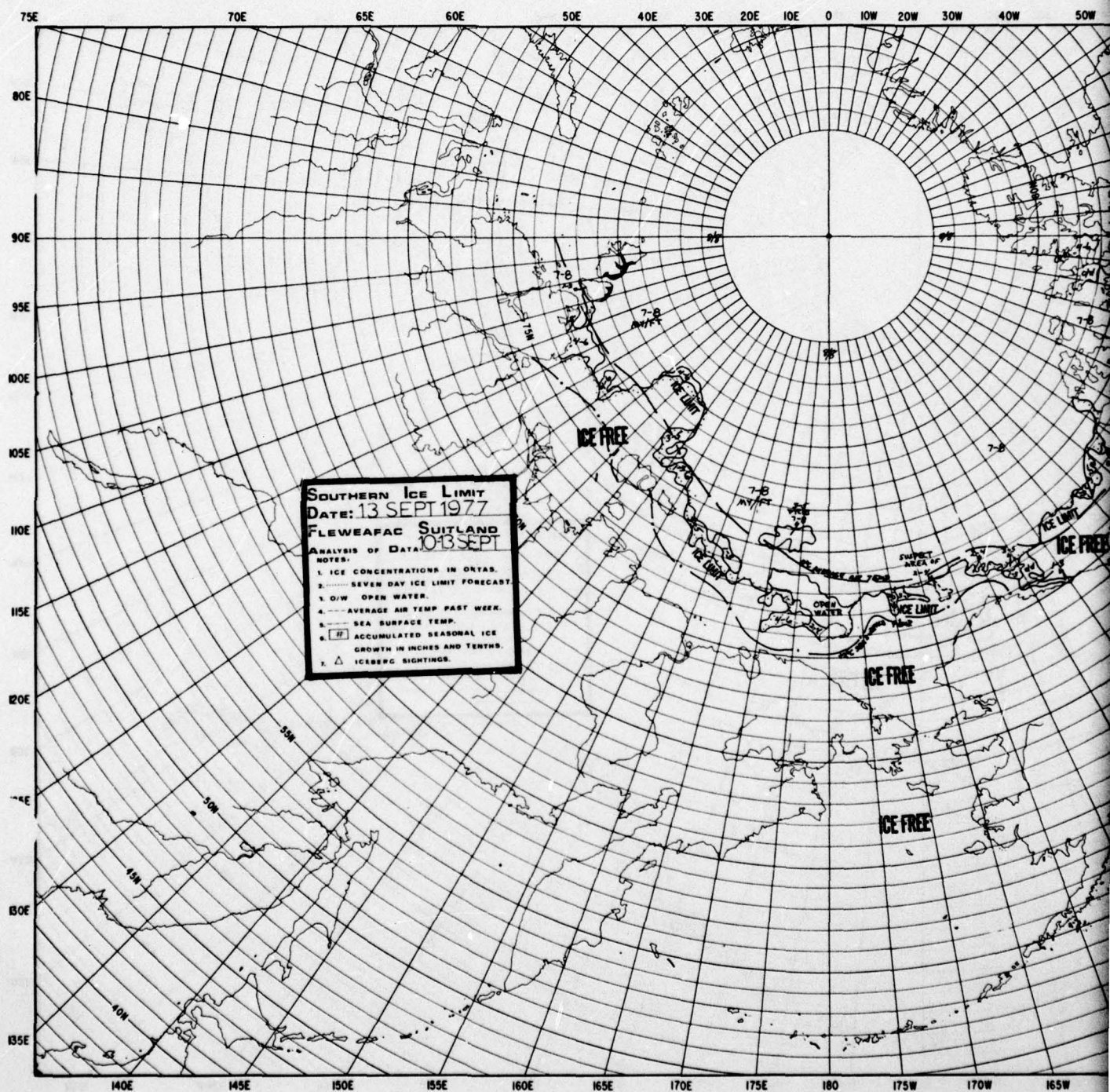


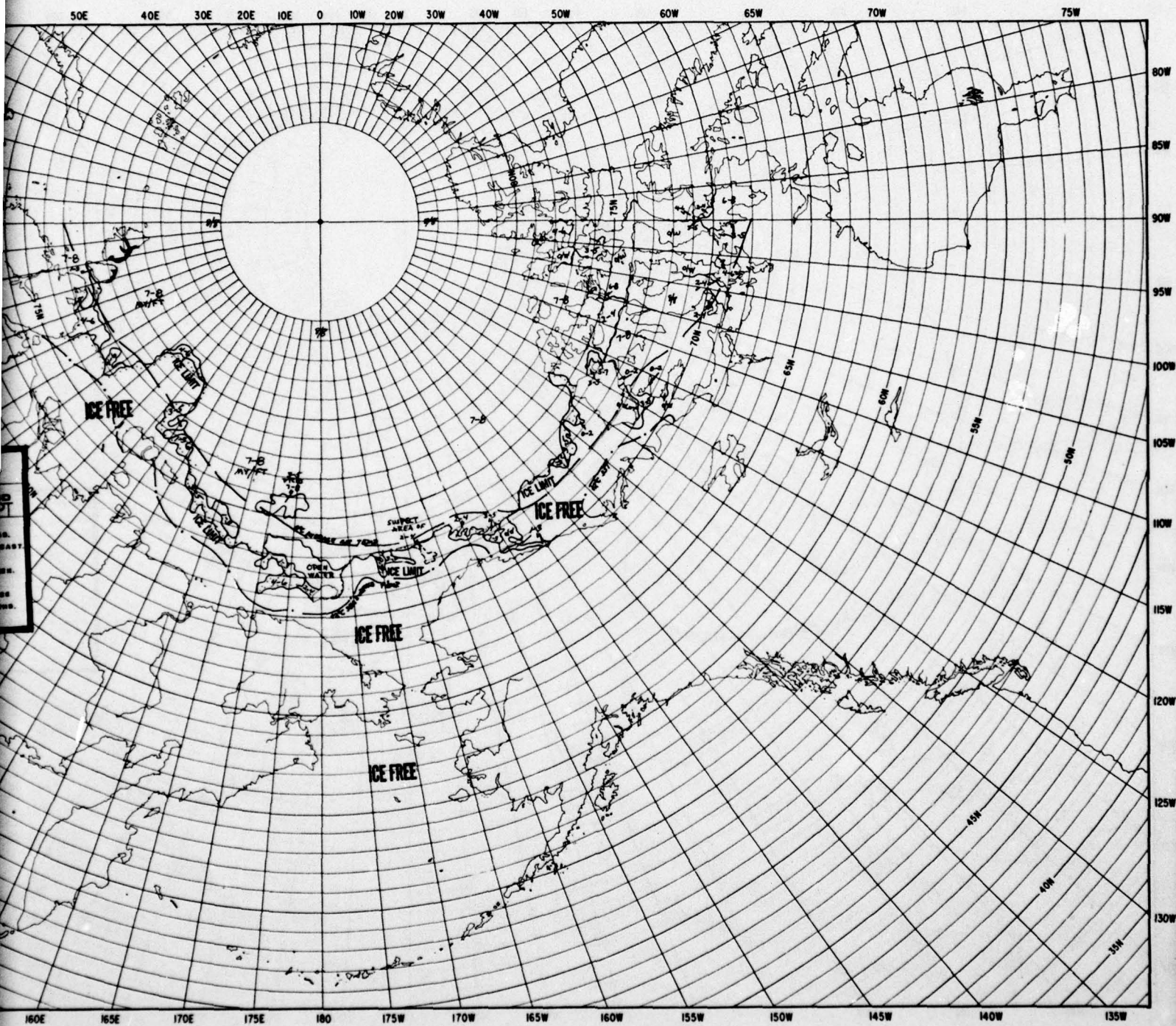


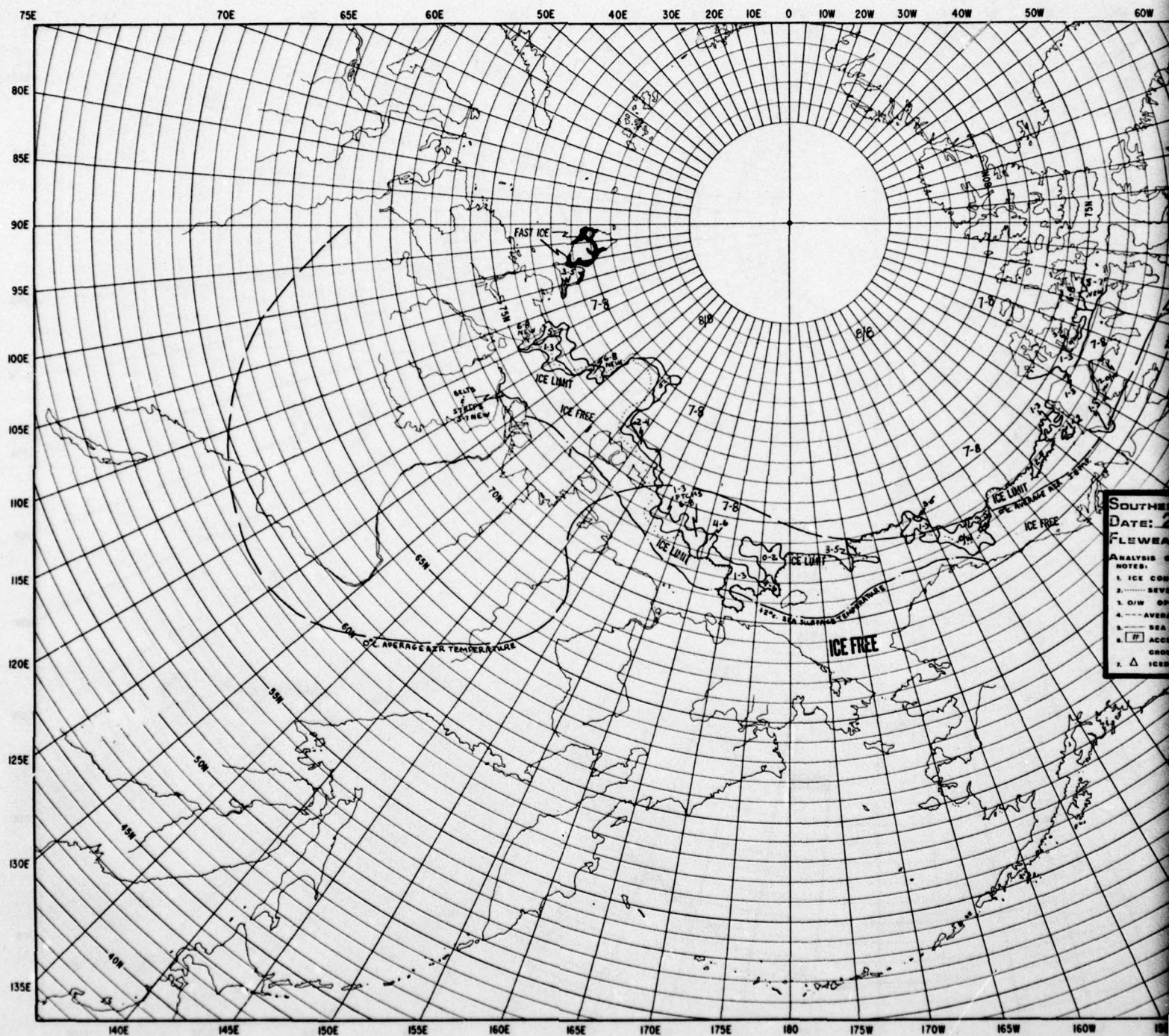


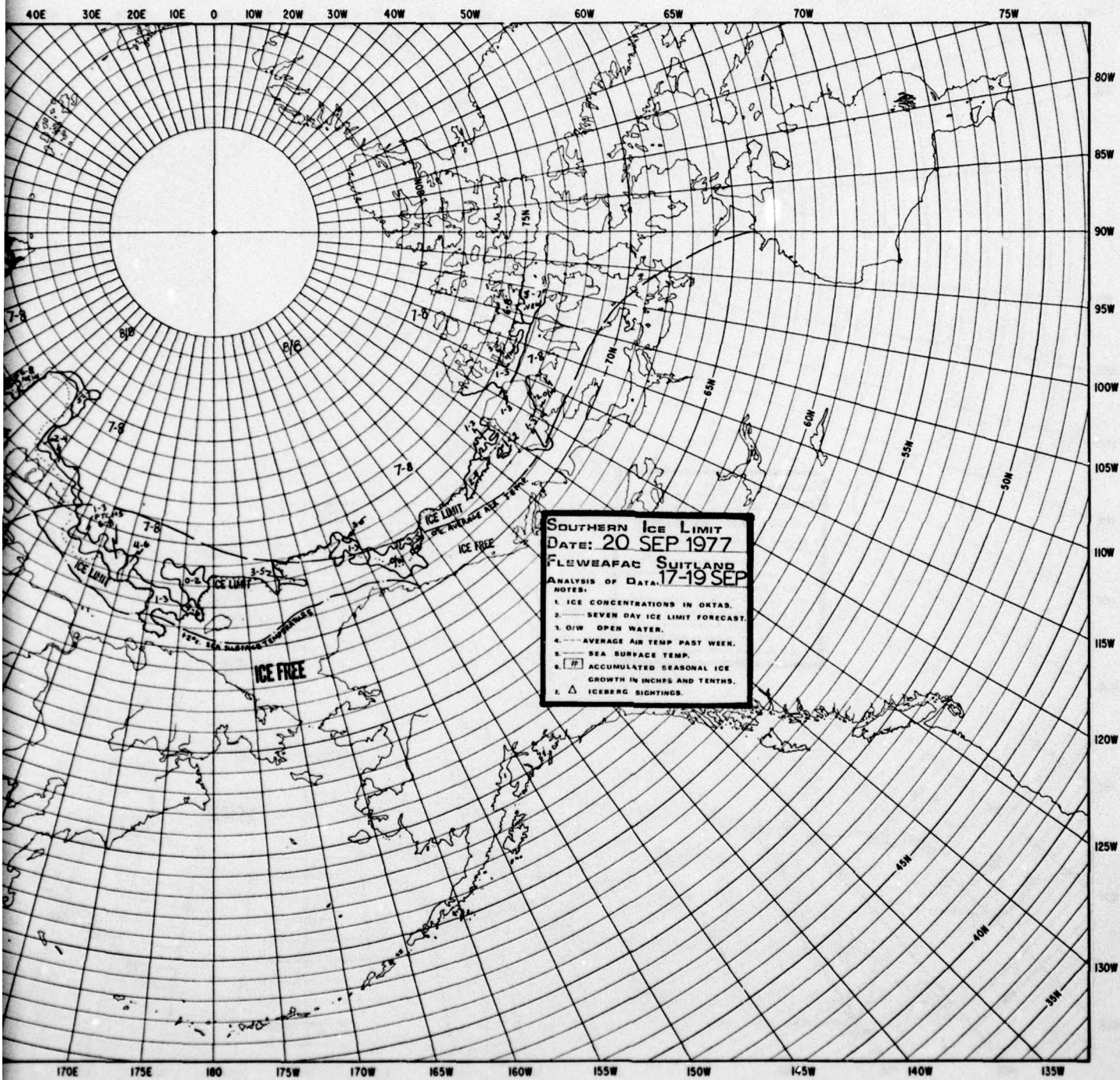


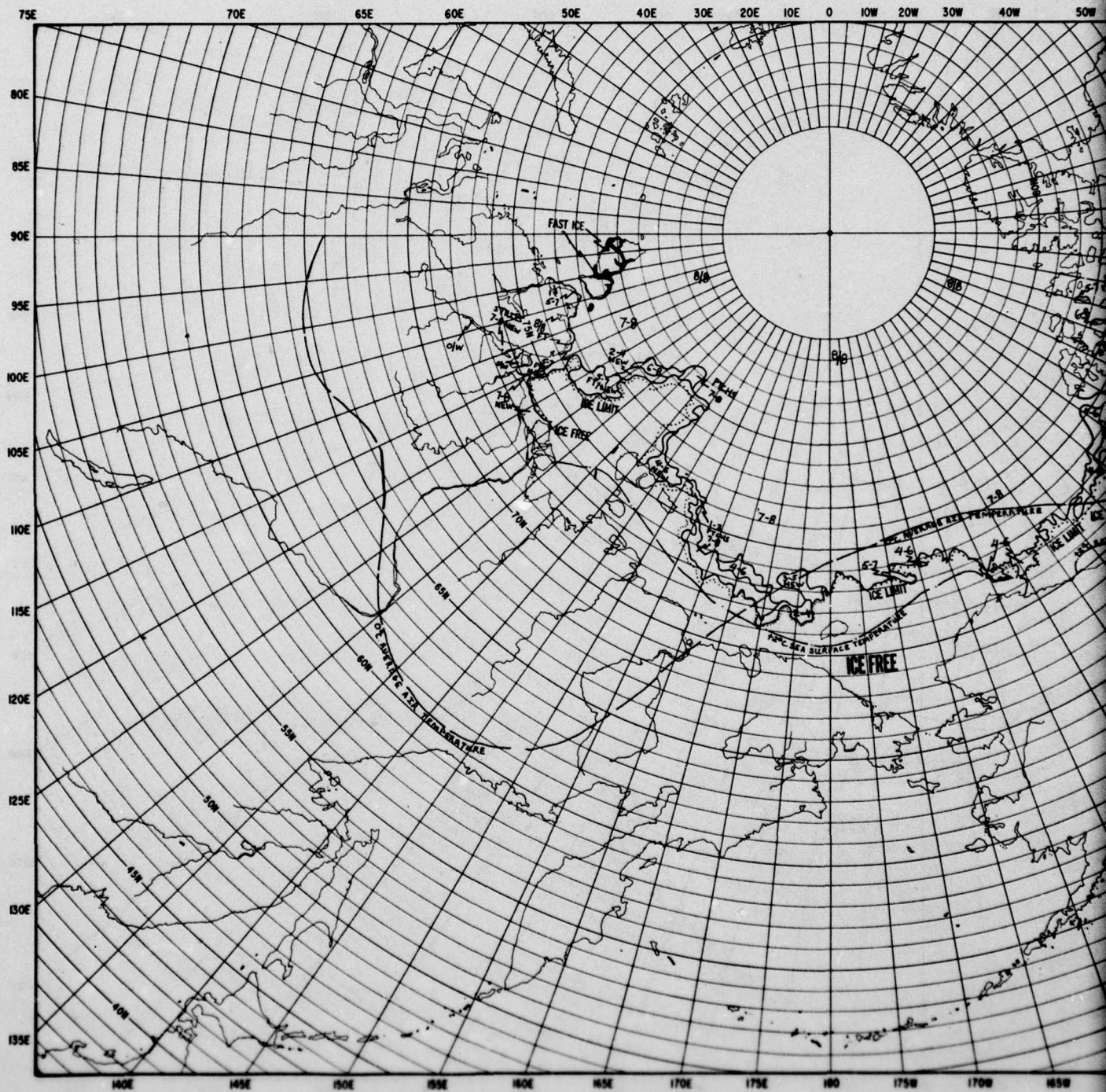


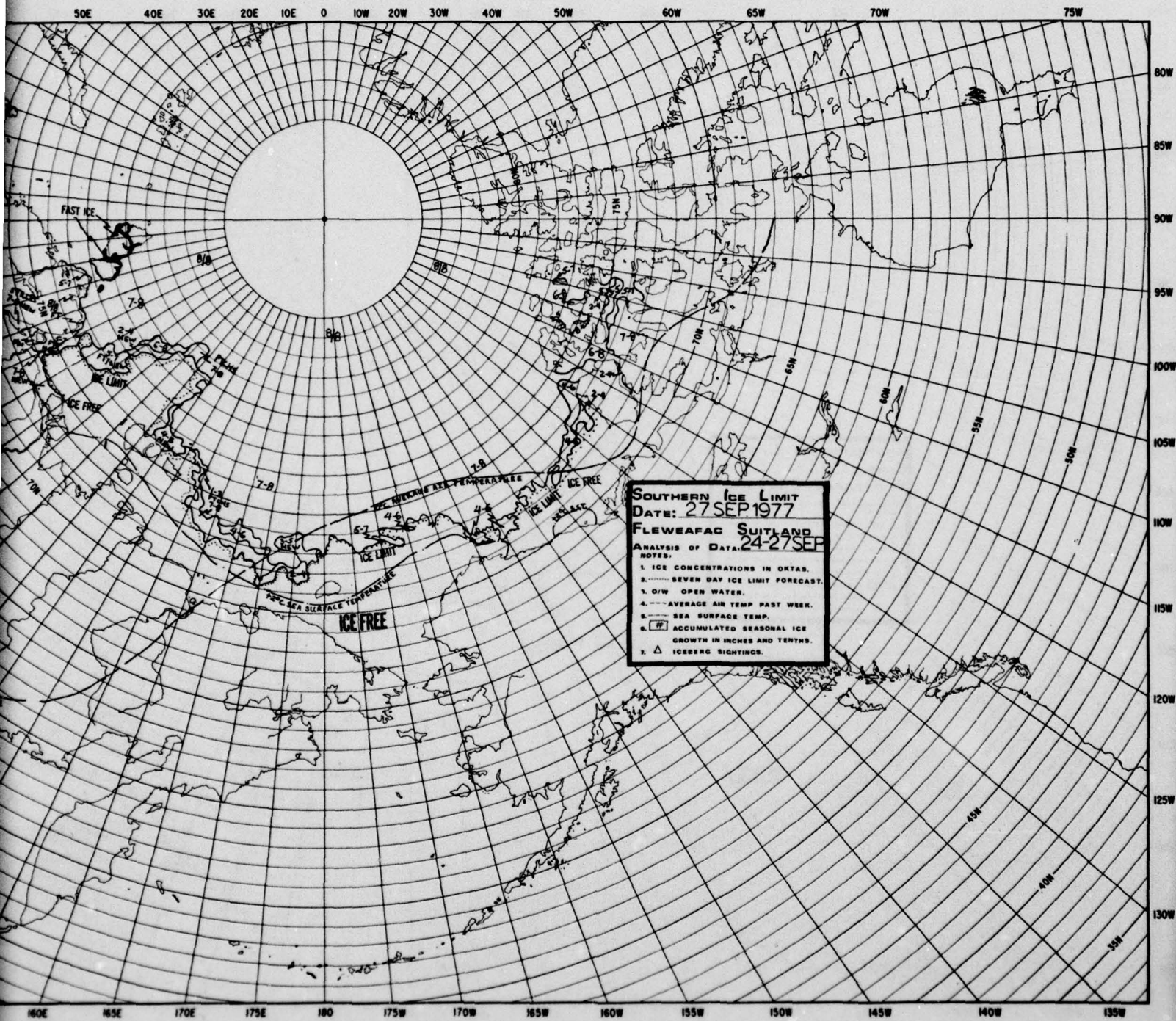


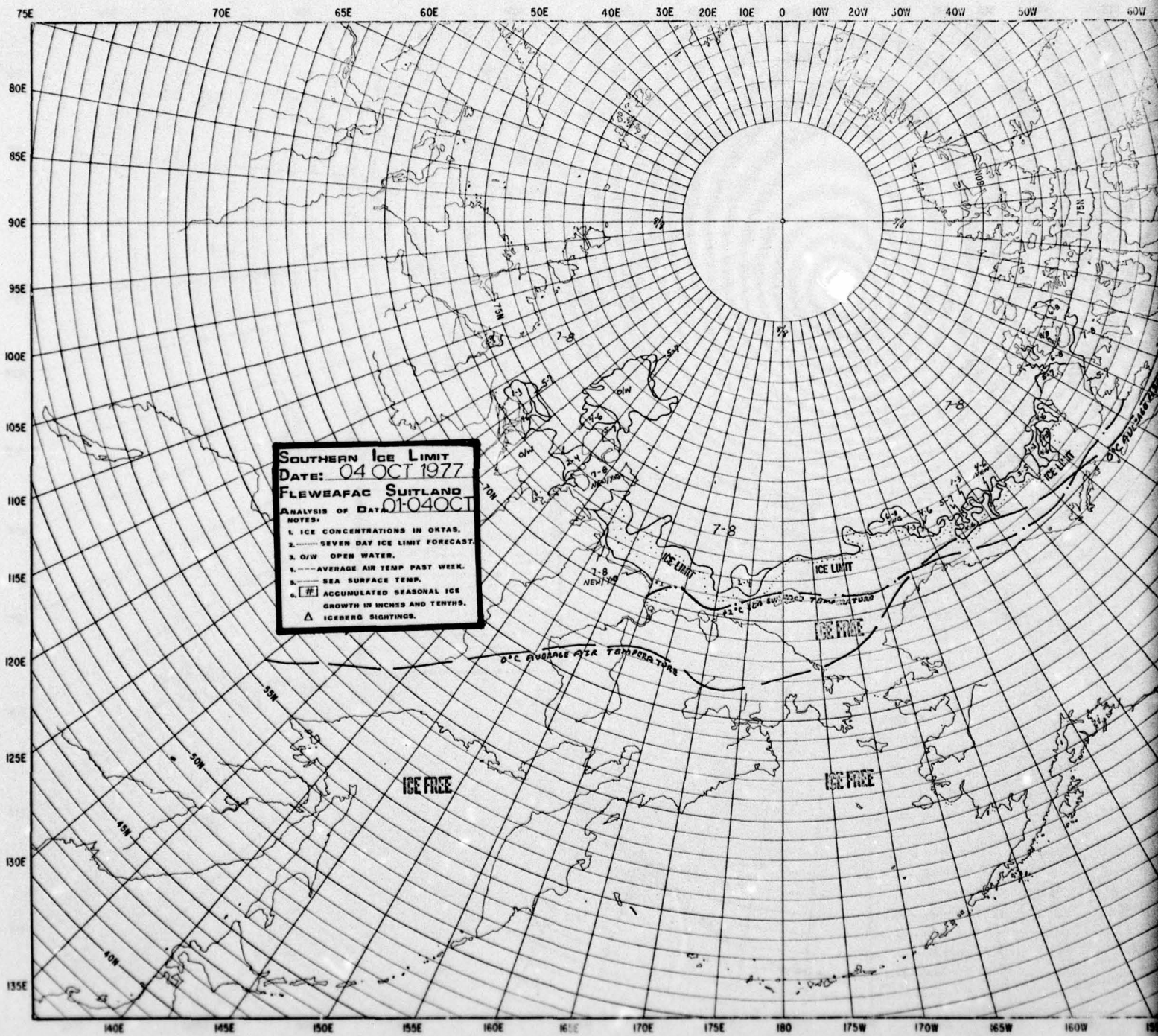


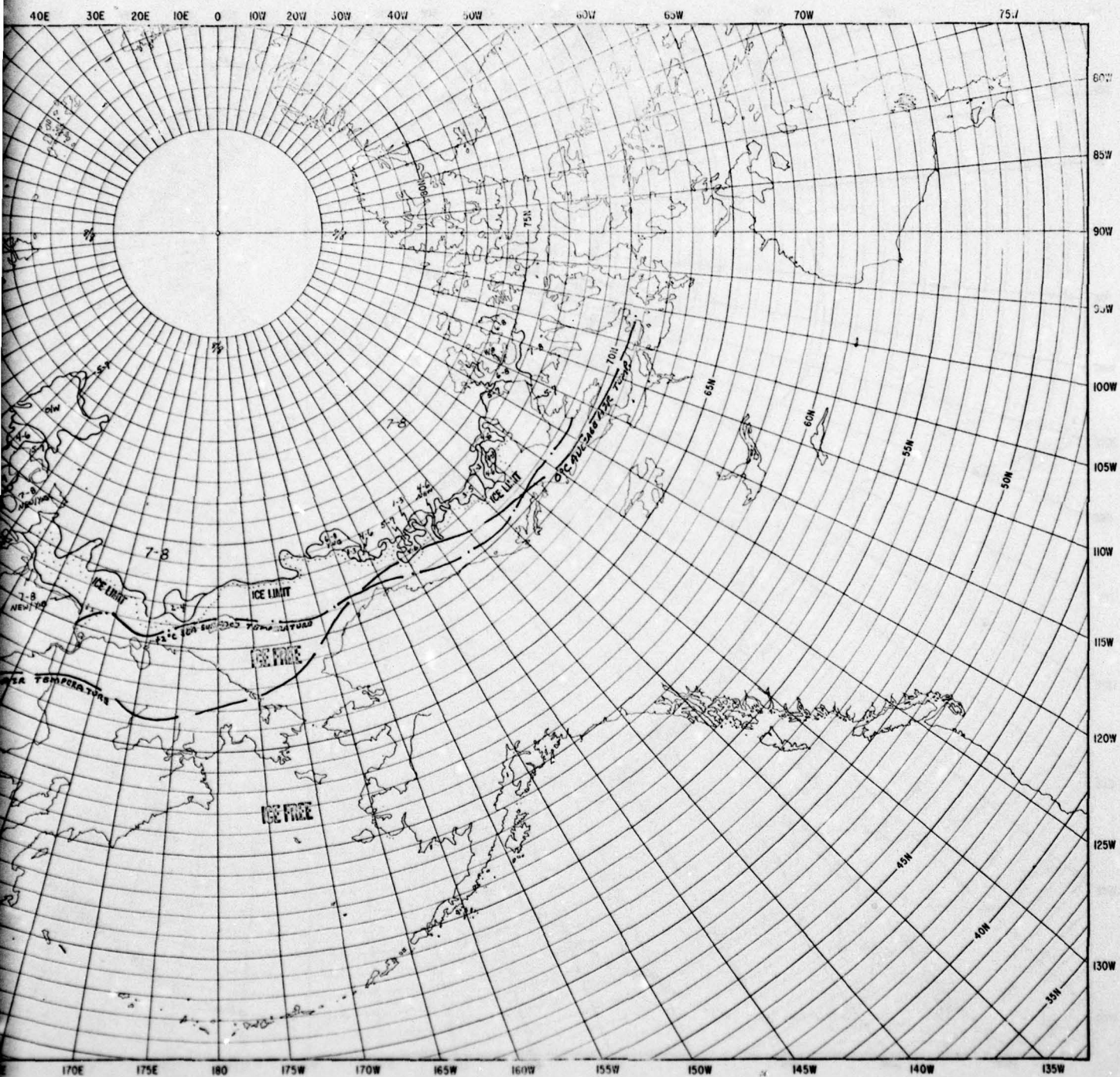


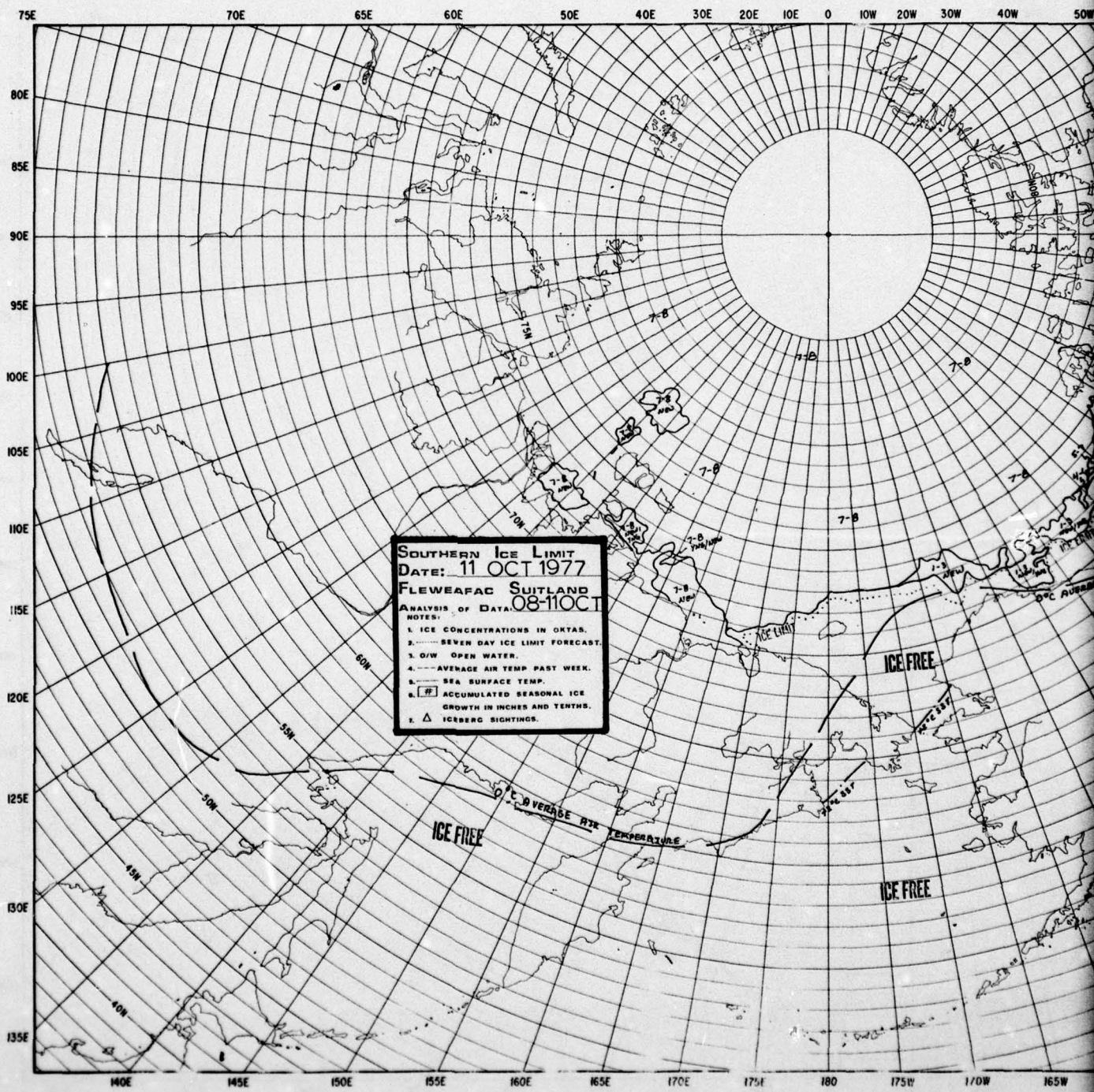


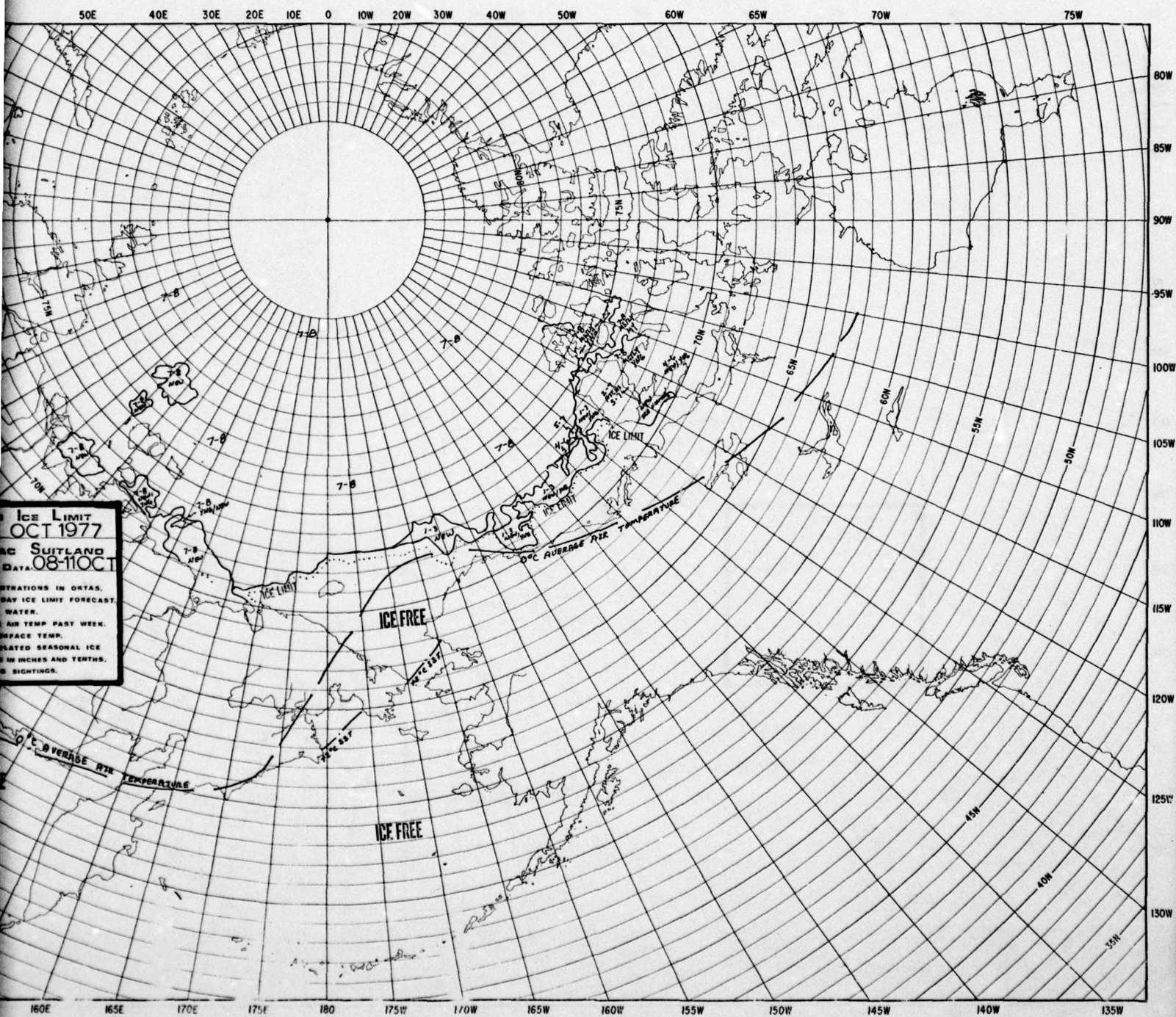


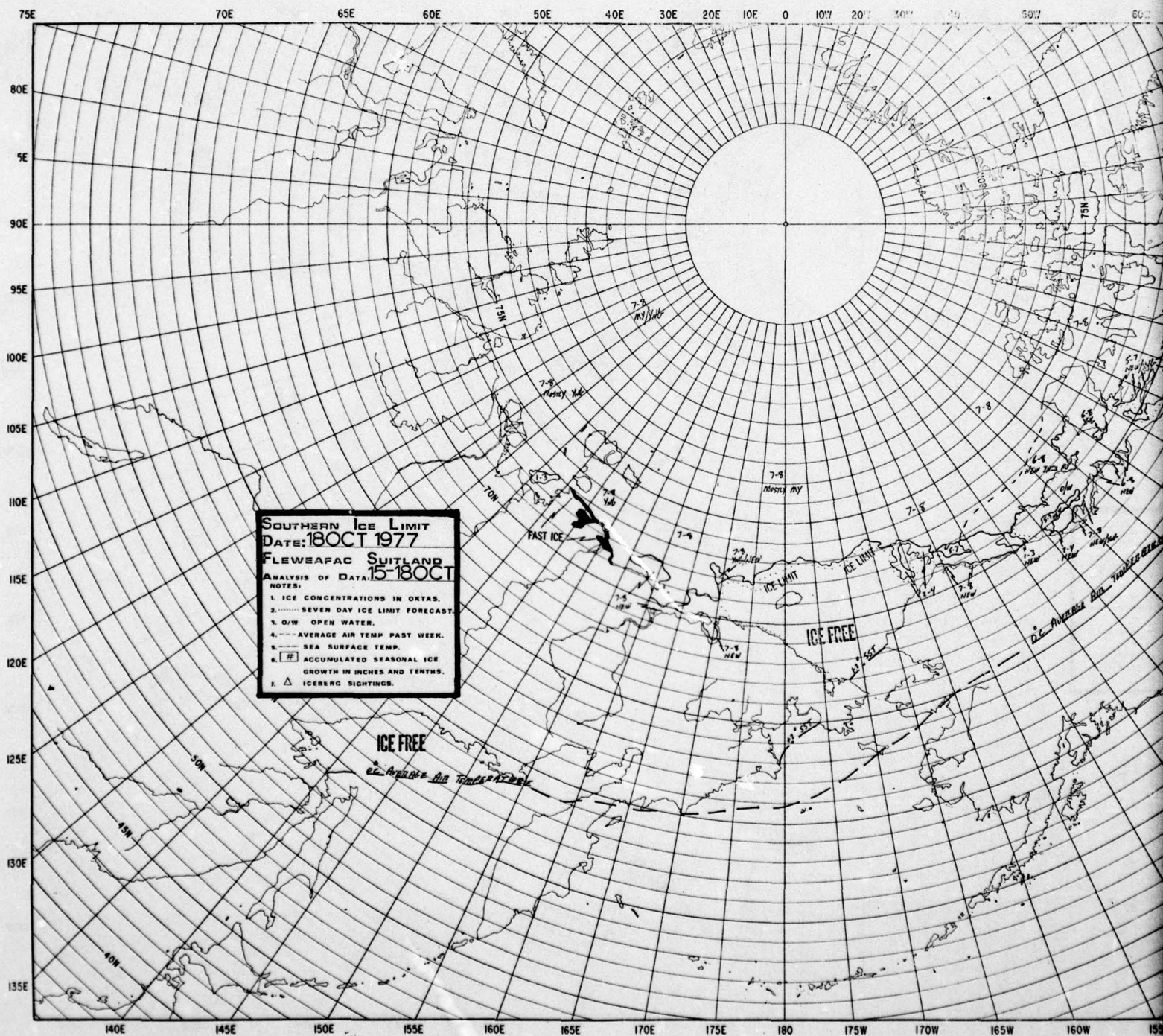


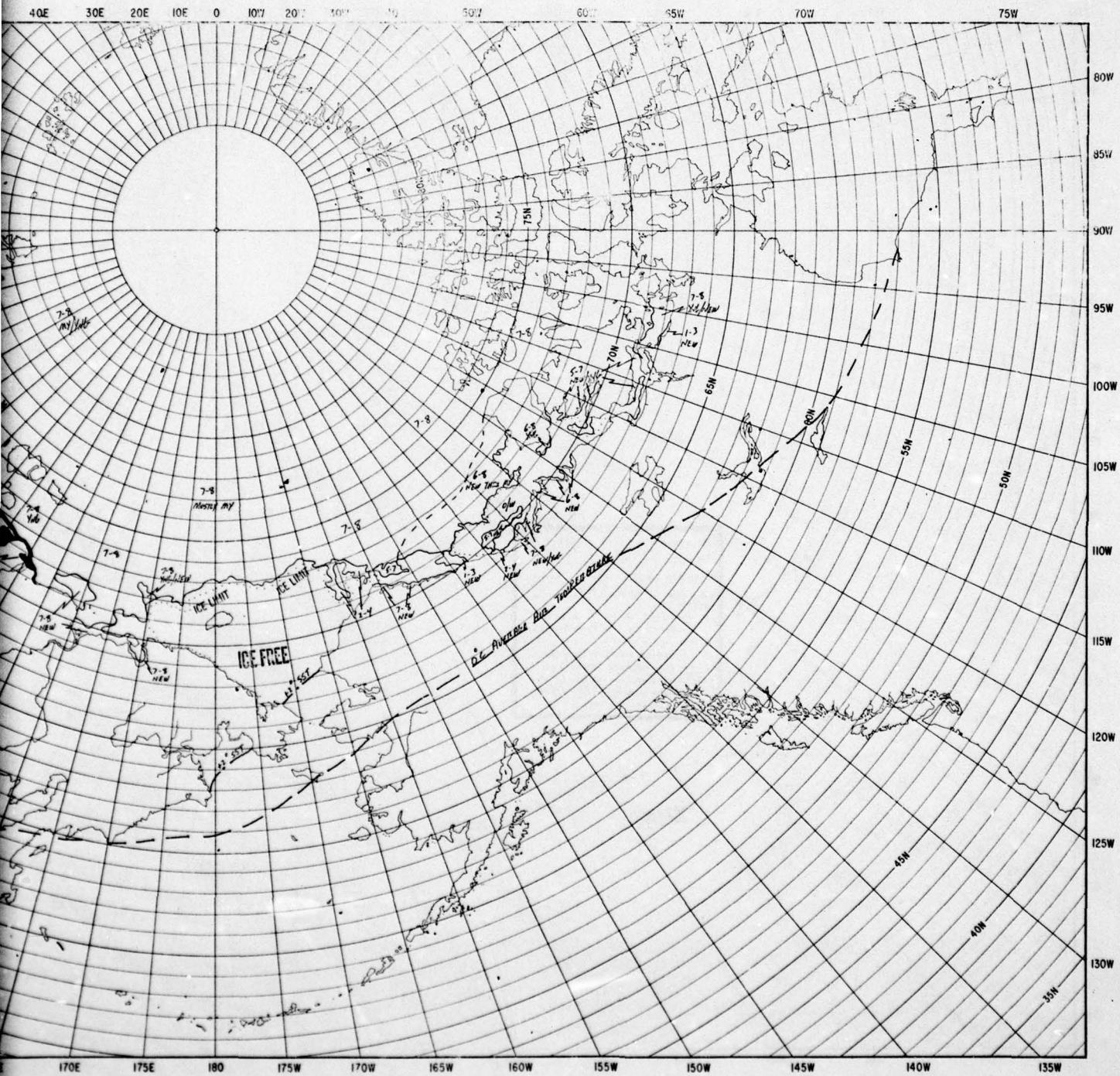












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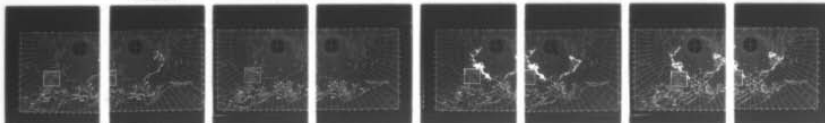
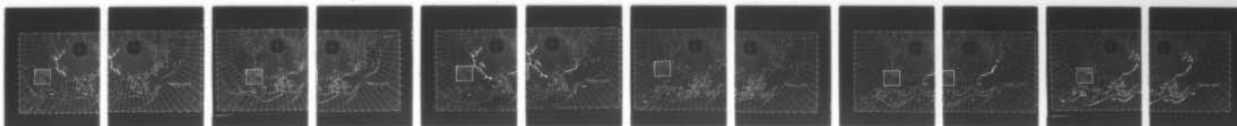
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